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Dräger Gas List 2018

List of detectable gases and vapours

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Gas list to find a suitable fixed installed
Dräger gas detection instrument for the detection
of a specified substance

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Subject to alteration

Search Indexes

This list of gases consists of three search indexes and the main part. The search indexes are suitable to find the substance in question by having only its CAS number, its name (including short name or technical abbreviation), or its sum formula.

Using the search indexes you will obtain the substance's associated number to look for in the list of gases.

If the substance is not listed, this does not necessarily mean that this substance is not detectable.

Search Index for CAS Number

The CAS number is a worldwide used code to identify a chemical substance non-ambiguously. This number is issued by the Chemical Abstracts Service and is the easiest way to characterise a chemical substance. Knowing the CAS no. means to be able to get comprehensive information and links from internet and search engines.

The considered substance is unambiguously specified by the CAS number.

Search Index for Name / Abbreviation

When sorting alphabetically the chemical prefixes such as n-, i-, sec-, tert-, N-, N.N-, or numbers were omitted. Please proceed correspondingly when looking for a substance.

When searching 1,2-Dichloroethane look for Dichloroethane, find tert-Butanol under Butanol and Methyl-tert-butylether under Methylbutylether.

This search index also lists short names or technical abbreviations. However these names may be ambiguous from chemical aspects (e.g. Dimethyl ether and Dimethoxy ethane usually both are short-named as "DME").

Furthermore refrigerants were considered. The so called ASHRAE code is basically preceded by "R" (meaning refrigerant) although in other countries characters such as "F", "FCK", "HFA", "HFC", "HFO" or names such as "Freon", "Frigen" and "Propellant" etc. are used. So, if you look for e.g. Freon 134a please search for R134a.

Search Index for Sum Formula

For every chemical formula - normally given as a semi-structure formula - a sum formula exists. A sum formula is formed according to the Hill-system:

Within each sum formula the element symbol C (for Carbon) is on the first place, the element symbol H (for Hydrogen) on the second, followed by all other element symbols in alphabetical order. For every element symbol the order is given with increasing number of atoms of the corresponding molecule. So it seems a little bit strange having a sum formula of e.g. Ammonia H_3N , of Sulphur dioxide O_2S and of Hydrogen cyanide CHN.

Having the chemical formula of a substance, the individual element symbols have to be summarised and sorted accordingly. With the sum formula obtained this way you can go into the search index for sum formulas to get the substance's associated number.

Example: CH_3COOH

Sum formula is $C_2H_4O_2$. This is the sum formula of Acetic acid. But you can verify that this is also the sum formula of Methyl formate ($HCOOCH_3$).

Attention:

Sum formulas may be ambiguous!

The Gas List

This list is the real list of gases. For each substance there are at least three lines. Besides the columns 1 and 16 of the current number the gas list comprises 20 further columns which are explained in the following:

Column 2: Substance, Chemical formula

The main name covers two columns in the first line. The second line shows the CAS no., and the third line shows the chemical formula.

Column 3: Shortn., S-formula

If there is a technical abbreviation known it is listed in this column second line. The sum formula is printed in the third line.

Column 4: Further synonyms

If further substance names are known the three most usual ones are listed here.

Column 5: Molw. g/mol

In the first line the molecular weight (mol weight) M is listed. The mol weight is used in many calculations, e.g. you can calculate the relative density of a gas or vapour by dividing value M by 28.96. If the result is less than 1 the gas is lighter than air. In most cases the result will be greater than 1 - so it is heavier than air. In case of vapours, however, the maximum vapour pressure (the maximum concentration at a given temperature) in an air/vapour mixture has to be regarded (see vapour pressure column 7): Vapours can never exist in a 100 %v/v-concentration! Below the mol weight the value of the relative density compared to air is listed. It is marked by a subsequent "r" (for relative).

Example: n-Butanol: 2.56 r

Vapours of n-Butanol are 2.56 times heavier than air.

By using the mol weight M you can convert concentrations given in %v/v (= % by vol.) or ppm to obtain g/m³ or mg/m³.

Using the mol weight M you can also calculate the density of a gas in kg/m³ (at 20 °C and 1013 mbar) by simply multiplying with a factor of 0.04179:

Example: The mol weight of Propane is 44.1 g/mol, so the density of Propane is

$$\rho = 0.04179 \cdot 44.1 = 1.843 \text{ kg/m}^3$$

If density ρ and mol weight M are known you are able to calculate the amount of liquid to be evaporated in a given volume to obtain a defined vapour concentration. However, it is very important that this liquid is evaporated completely. This requires a sufficiently high vapour pressure.

Use the "calibration chamber formula": To obtain a vapour concentration c in a volume of 3 litres at 20 °C and 1013 mbar you have to insert the following amount F (in microlitres) of the liquid:

$$F = 1.2478 \cdot \frac{M}{\rho} \cdot c$$

Example: Ethyl acetate, M = 88.1 g/mol, $\rho = 0.90 \text{ g/ml}$, LEL = 2.0 %v/v.

To obtain 50 %LEL (c = 1.0 %v/v) vapour of Ethyl acetate in the 3 litres calibration chamber insert

$$F = 1.2478 \cdot \frac{88.1}{0.90} \cdot 1.0 = 122 \text{ microlitres}$$

of liquid Ethyl acetate.

If for the substance in question the calibration chamber procedure is applicable the value of the amount to be inserted into the 3 litres calibration chamber to obtain 50 %LEL (based on the LEL PTB in column 10) is printed below the value of the density. It is marked by a subsequent "v" (for volume).

Example: n-Hexane: 81 v

You need to insert 81 microlitres into the Dräger Calibration Chamber to obtain 50 %LEL of n-Hexane vapour.

Column 6: Dens. g/ml

In this column the density ρ of the liquid in g/ml (= g/cm³) at 20 °C is listed. This value exists only for liquids, so gases are indicated by "Gas".

Column 7: Boil. °C

This column shows the boiling point of the substance in °C (at 1013 mbar).

Below the boiling point given in °C the boiling point is printed in °F. This value is marked by a subsequent "°F".

Column 8: p₂₀ mbar

Vapour pressure p₂₀ of a liquid at 20 °C given in mbar (= hPa). Vapour pressure is only defined for liquids. So for gases instead of the vapour pressure you will find the marking "Gas" in this column.

The vapour of each liquid forms a pressure which depends on the nature of liquid and the liquid's temperature. If the vapour pressure is low, the liquid evaporates slowly and thus only produces low vapour concentrations

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(for these flammable liquids the flashpoint is usually high).

The maximum vapour concentration c_{\max} (saturated vapour concentration in %v/v), which can only form in closed containments, can be calculated as follows:

$$c_{\max} = 100 \cdot \frac{p_{20}}{1013 + p_{20}}$$

If the vapour pressure is considerably lower than the atmospheric pressure, c_{\max} can be estimated by dividing the given vapour pressure by the environmental atmospheric pressure.

Example: n-Nonane, $p_{20} = 5$ mbar, so

$$c_{\max} = 100 \cdot \frac{5}{1013} = 0.49 \text{ %v/v}$$

So at 20 °C no vapour concentrations higher than 4900 ppm n-Nonane can exist. Higher temperatures or lower atmospheric pressure are necessary to produce higher vapour concentrations. Since the Lower Explosion Limit is 0.7 %v/v, even in a closed containment at 20 °C no explosive vapour/air-mixtures of n-Nonane can form. This is the reason why the "calibration chamber formula" does not apply for substances with a low vapour pressure: at 20 °C it is not possible to produce vapour concentrations of e.g. 0.6 %v/v of n-Nonane.

Column 9: Flpt. °C

This column shows the flashpoint of flammable liquids, preferably based on the source PTB. Flammable gases do not have a flashpoint and are marked by "Gas". Gases or liquids being non-flammable are marked by "n. a."

The empirically determined flashpoint is defined as the temperature of a flammable liquid which (in a closed containment) is needed to obtain an ignitable vapour concentration above the liquid's surface.

If ambient temperature and liquid temperature are clearly below the flashpoint (e.g. 10 °C lower), the liquid cannot be ignited.

Example: n-Nonane, flashpoint 31 °C, is not ignitable at 20 °C.

The relatively high flashpoint of n-Nonane is arising from its low vapour pressure. As already shown it is not possible to produce vapours of 100 %LEL under normal conditions (20 °C). As the flashpoint is a temperature you can also convert a flashpoint F given in degrees Celsius into a flashpoint F given in degrees Fahrenheit using the conversion

$$F_{\circ F} = \frac{9}{5} \cdot F_{\circ C} + 32$$

Example: n-Nonane, flashpoint is 31 °C,

$$F_{\circ F} = \frac{9}{5} \cdot 31 + 32 = 87.8 \text{ °F.}$$

Below the flashpoint F given in °C the flashpoint is printed in °F. This value is marked by a subsequent "°F".

Columns 10, 11, 12, 13 and 14: LEL

These columns show the lower explosion limit in %v/v. Non-flammable gases and liquids are marked by "n. a.". A void cell in this column indicates that the LEL is unknown. Five values of different sources are listed here:

PTB: Source: Brandes, Möller (PTB): Safety Characteristic Data, Vol. 1: Flammable Liquids and Gases, Wirtschaftsverlag NW, 2nd Edition, 2008

IEC: IEC 60079-20-1: 2010, Explosive atmospheres - Material characteristics for gas and vapour classification

NIOSH: NIOSH Pocket Guide to Chemical Hazards, DHHS (NIOSH) Publication No. 2005-149, Sept. 2007.

NFPA: NFPA Fire Protection Guide to Hazardous Materials, 14th edition, 2010 (including the NFPA 497).

RUS: GOST R-51330.19:1999, Edition 2000 / 2007, originating from the former IEC-publication 60079-20:1996, but with several modifications and amendments.

If there is no LEL available from these five sources, LELs coming from other sources (e.g. the GESTIS database of hazardous substances) have been used, indicated by a *. Also LELs obtained by halving the stoichiometric concentration of optimum combustion as an approximate estimation are marked by **.



Conversion (valid at 20 °C):

By means of the mol weight (column 5) you can convert the LEL to g/m³ by multiplying the LEL given in %v/v with the mol weight M and dividing it by 2.4.

Example: n-Nonane, M = 128.3 g/mol, LEL = 0.7 %v/v, so

$$\text{LEL}_{\text{g/m}^3} = \frac{128.3}{2.4} \cdot 0.7 = 37.4$$

The LEL of n-Nonane is 37.4 g/m³.

And vice versa:

$$\text{LEL} = \frac{2.4}{M} \cdot \text{LEL}_{\text{g/m}^3}$$

Below the values of the LEL given in %v/v the corresponding values given in g/m³ are listed. They are enclosed in parenthesis.

Column 15: AIT °C

This column shows the auto-ignition temperature (AIT) of flammable gases and vapours. For non-flammable substances this column shows "n. a.". If known, the explosion group with subgroup, IIA, IIB or IIC (acc. to the IEC (EN) 60079-0 standard), is listed in the second line. If the ignition temperature is known, the third line contains the temperature class. Electrical devices to be operated in potentially explosive atmospheres containing the considered flammable substance must at least be marked with the given explosion group and temperature class:

Example: Allyl alcohol:

AIT = 375 °C, IIB T2.

An electrical device must at least be marked IIB T2. Devices marked IIA T2 or IIB T1 are not allowed to be used in atmospheres where allyl alcohol may be present in potentially explosive concentrations.

Column 17 and 18: WEL Germ. and TLV USA

If available this column lists toxic limits as workplace exposure limit (WEL) or threshold limit values (TLV) in ppm.

WEL Germ.: Source: German legally binding TRGS 900, last update June 2017.

TLV USA: Source: OSHA.
If no OSHA values available: NIOSH.

Commonly the TLVs are average values, but sometimes ceiling values (marked by a "c") are listed. In no case ceiling values are allowed to be exceeded. A WEL value followed by "T" indicates the tolerance concentration of carcinogenic substances according to the German legally binding TRGS 910.

If neither the German WEL nor the US TLV is listed this does not necessarily mean that the considered substance is not toxic! Short-term limit values are not included in this gas list.

Conversion (valid at 20 °C):

By means of the mol weight (column 5) you can convert the WEL or TLV to mg/m³ by multiplying the given value in ppm with the mol weight M and dividing it by 24.

Example: n-Nonane, M = 128.3 g/mol, TLV = 200 ppm:

$$\text{TLV}_{\text{mg/m}^3} = \frac{128.3}{24} \cdot 200 = 1069$$

The TLV is 1069 mg/m³.

Vice versa:

$$\text{TLV} = \frac{24}{M} \cdot \text{TLV}_{\text{mg/m}^3}$$

Below the limit values given in ppm the corresponding values given in mg/m³ are listed. They are enclosed in parenthesis. As these figures are exactly calculated they may slightly be different from the officially issued values which are mostly rounded values.

Column 19: MP - Measuring principle

The measuring principle is listed using the following abbreviations:

CT - catalytic, transmitter or sensing head using heat of reaction principle

IR - infra-red absorption, transmitter with IR sensor

EC - transmitter with electrochemical sensor

OP - infra-red absorption, open path measuring system

Column 20: Detectable with

This column lists the transmitters by means of which the considered substance is detectable. This information is self-explaining.

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Column 21: Suitable measuring ranges

Remark: For transmitters of the series 5000 and 8000 the product name "Polytron" is mostly replaced by a "P".

PEX 3000, SE Ex, P 5200 and P 8200

For catalytic bead sensors and transmitters the full scale deflection value (f.s.d.) is always 100 %LEL. If starting with "10 //" also the 10 %LEL sensor can also be used for the detection of the listed substance. In this case the full scale deflection is 10 %LEL.

Dräger PIR 7000 type 334 and 340

If for the substance in consideration there is an individual data set which can be selected from a gas library for direct configuration this is indicated by the term "Gas-Library". Separated by a "/" also the lowest f.s.d. value in ppm is listed for these substances.

In any case the minimum and maximum f.s.d. values in %LEL are listed.

The information given for PIR 7000 is also valid for the transmitter P 8700 of the same type (334 or 340).

Dräger P 5700 type 334 and 340

To indicate that with this IR-transmitter only the given full scale deflection values are configurable, these are separated by a "+". So, "20 + 50 + 100 %LEL" means that only these three full scale deflection values can be configured.

Dräger PIR 3000, P5310, P8310

The full scale deflection value of these IR-transmitters is always 100 %LEL. Other measuring ranges are not suitable.

A "(!)" indicates that for the P 5310 and P 8310 or the DrägerSensor IR (DSIR) a special calibration procedure has to be performed.

For all IR-transmitters:

A "(\$)" indicates substances being surely detectable but not yet having undergone verifying measurements - so no calibration hints can be issued so far.

A "(?)" indicates substances which are reasonably assumed to be detectable but have not been verified so far in the application laboratory.

A "(&)" indicates that special hints for application and calibration have to be requested for the detection of this substance.

Pulsar

The expression "Polytron Pulsar 2" covers all the variants Polytron Pulsar, Polytron Pulsar 2 and Polytron Pulsar duct mount as well as Pulsar 7000 series. The full scale deflection value is 1 or 4 / 8 LELm, where 1 LELm refers to the duct mount variant. For certain substances cross sensitivity factors (CSF) are listed, these are valid in respect to propane (LEL = 1.7 %v/v) and the substance's LEL given here. The CSF is listed in column 22.

Polytron 7000 and Polytron 8100

Separated by a "/" the minimum, standard, and maximum full scale deflection values are listed.

For substances with a measuring parameter data set in the sensor's EPROM an LDL (Lower Detection Limit) is listed. For further information refer to the sensor data sheet.

For substances available in the sensor's EPROM the full scale deflection values have to be multiplied by the given cross sensitivity factor.

Example: Morpholine with Polytron 7000 and sensor NH₃: "50 / 100 ppm x 4" means that the configured f.s.d. of 50 or 100 ppm NH₃ corresponds to 200 or 400 ppm Morpholine. So when applying Morpholine to the sensor the reading has to be multiplied by factor 4 to obtain the true concentration.

Concerning the sensors OV1, OV2, H₂S, and NH₃, additionally the gas type to be configured is recommended:

Example: 1-Hexene: "as Aald x 2" means: To measure 1-Hexene configure for Aald = Acetic aldehyde (and calibrate for Acetic aldehyde) and multiply the reading by 2 to have the true concentration of 1-Hexene.

Remark: The given cross sensitivity factor may fluctuate considerably and should be individually determined by means of the target gas.

Polytron 5100

Only the full scale deflection values separated by a "+" can be configured.



Polytron 3000 and Polytron 2000

The possible full scale deflection values are separated by an "or" to indicate that these are different products.

Column 22: Important remarks

Here you will find remarks e. g. concerning potential poisoning of catalytic bead sensors by corrosive or polymerizing substances and cross sensitivity factors S of electrochemical sensors resp. CSFs of the Pulsar.

Measuring performance approval

If the considered substance is listed in the measuring performance certificate (mostly in respect to the "measuring function for explosion protection" acc. to EN 60079-29-1) this is indicated by "performance approved". This remark is valid for all the listed products.

For the results of the performance tests including the deviated application hints please refer to the relevant performance approval report and the instructions for use.

Cross sensitivity factors

For electrochemical sensors the given relative sensitivities S are only valid for new sensors and a value fluctuation of about $\pm 30\%$. A "*" indicates a lower exemplary fluctuation of $\pm 10\%$.

An "(L)" indicates that the sensor to be used for the substance in consideration is recommended for gas leak detection.

Example: OV1-sensor for Butylene oxide: "S = 0.4 (L)" means the sensitivity of the OV1-sensor exposed to Butylene oxide is ca. 40 % compared to Ethylene oxide.

This sensor should only be used to detect gas leaks of Butylene oxide. Since the cross sensitivity may fluctuate considerably from sensor to sensor it is recommended to test the sensor by means of a suitable concentration of the target gas.

Gas leak detection

A gas leak is an unpredictable abnormal release of gases or vapours of higher concentrations.

A gas leak has to be regarded as an exceptional event. In case of normal operation there is only clean air (without even low concentrations of the target gas or vapour).

A gas detection system for gas leak detection means to give a warning when a reasonable alarm threshold is exceeded rather than to measure the current gas concentration exactly. This can be realized by the use of cross sensitivity factors as long as a proof test with a suitable concentration of the target gas triggers a preset alarm threshold under the current environmental conditions.

After a gas release a leak gas detection system needs to be checked for proper function.

Mixtures of gases and vapours

Not to expand this gas list unnecessarily, only pure substances, but not mixtures of gases and vapours, are listed. This is especially true for mixtures of flammable solvents and fuels which are differently blended and handled under different product names by different manufacturers.

For %LEL-measurement the gas detection instrument has to be calibrated for those substances in relevant share in the mixture, which are detected with the least sensitivity. From this guideline calibration procedures based on pure substances can be derived. For example to detect Kerosene by means of a catalytic bead sensor commonly a Nonane-calibration is recommended. Moreover, a catalytic bead sensor calibrated for n-Nonane is also very suitable to detect numerous hydrocarbon mixtures such as gasolines, petrols, aviation fuels and jet petrols as well as Naphtha, Solvent Naphtha, Varnish Makers & Painters Naphtha (VMPN), White Spirit, etc.

However, whether such a calibration leads to safe detection in a given application can only be verified by thoroughly observing the individual substances of content or even by performing the according measurement tests in the laboratory.

Search Index for CAS-Number

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541-05-9	239	623-53-0	289	1333-74-0	250	7154-79-2	400	8000-41-7	385
541-41-3	202	624-89-5	293	1445-45-0	417	7446-09-5	384	10025-78-2	410
542-55-2	77	624-92-0	162	1569-01-3	362	7550-45-0	404	10025-87-3	348
542-75-6	134	627-27-0	54	1569-02-4	193	7637-07-2	39	10026-04-7	381
543-59-9	28	628-32-0	222	1590-87-0	181	7646-78-8	403	10028-15-6	336
544-01-4	120	628-63-7	22	1634-04-4	282	7647-01-0	252	10034-85-2	255
554-12-1	306	630-08-0	87	1640-89-7	205	7647-18-9	34	10035-10-6	251
556-67-2	331	637-92-3	200	1645-83-6	388	7664-39-3	254	10038-98-9	232
557-17-5	307	646-06-0	175	1663-39-4	65	7664-41-7	20	10049-04-4	89
557-98-2	99	681-84-5	399	1678-91-7	204	7665-72-7	55	10102-43-9	325
563-47-3	275	689-97-4	432	1712-64-7	377	7691-02-3	397	10102-44-0	324
563-80-4	309	695-12-5	434	1717-00-6	130	7697-37-2	322	10294-33-4	37
565-59-3	168	696-29-7	370	1873-88-7	234	7719-09-7	402	10294-34-5	38
583-48-2	166	766-09-6	220	2004-70-8	338	7719-12-2	349	13475-82-6	341
584-02-1	344	811-97-2	387	2031-62-1	139	7722-84-1	256	13482-23-0	267
589-34-4	297	872-05-9	117	2487-90-3	416	7726-95-6	40	13952-84-6	68
589-38-8	245	872-50-4	313	2517-43-3	266	7782-39-0	118	16219-75-3	216
590-19-2	41	919-94-8	29	2768-02-7	440	7782-41-4	224	16747-26-5	422
591-76-4	296	926-63-6	172	2807-30-9	360	7782-44-7	335	17129-06-5	194
591-78-6	244	930-22-3	43	3074-75-7	291	7782-50-5	88	19287-45-7	121
591-87-7	12	992-94-9	314	3178-22-1	76	7782-65-2	231	34590-94-8	271
591-97-9	94	993-07-7	425	3275-24-9	394	7783-06-4	258	111109-77-4	178
592-41-6	246	994-05-8	31	3277-26-7	396	7783-07-5	257	186598-40-3	70
592-43-8	247	996-35-0	171	3710-30-3	330	7783-58-6	233		
592-76-7	238	999-97-3	240	4091-39-8	93	7783-61-1	382		

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Substance	No.	Substance	No.	Substance	No.
2D	118	Allyl alcohol	13	i-Amyl formate	30
2PG1BE	58	Allyl aldehyde	9	Amyl hydride	342
2VP	439	Allylamine	14	Amylketone	147
3MBTA	280	Allyl bromide	15	tert-Amyl methyl ether	31
AA	13	Allylcarbinol	54	i-Amyl methyl ketone	277
Aald	1	Allyl chloride	16	n-Amyl methyl ketone	237
AC	253	Allylene	378	AN	4
Acetal	138	Allyl-2,3-epoxypropylether	17	Anhydrous ammonia	20
Acetaldehyde	1	Allylglycidylether	17	Aniline	32
Acetaldehyde diethyl acetal	138	Allyl methacrylate	18	Anisole	33
Acetic acid	2	Allyl-2-methyl acrylate	18	Anol	105
Acetic acid allyl ester	12	1-Allyloxy-2,3-epoxypropane	17	Anon	106
Acetic acid-2-butoxyethyl ester	57	Allyl trichloride	409	Antimony-(V)-chloride	34
Acetic acid butylester	61	AMA	18	Antimony pentachloride	34
Acetic acid chloride	7	Aminobenzene	32	Arsenic hydride	35
Acetic acid dimethyl amide	154	1-Aminobutane	67	Arsenic trihydride	35
Acetic acid-1,1-dimethyl ethylester	62	2-Aminobutane	68	Arsine	35
Acetic acid ethenyl ester	431	2-Amino-1-butanol	19	Azabenzene	379
Acetic acid ethyl ester	195	2-Aminobutan-1-ol	19	Azacyclohexane	351
Acetic acid methoxy propyl ester	272	2-Aminobutanol	19	Azacyclopropane	209
Acetic acid methyl ester	273	Aminocyclohexane	109	Azine	379
Acetic acid-2-methylpropyl ester	60	Aminocyclopentane	112	Azirane	209
Acetic acid pentyl ester	22	1-Amino-3-dimethylaminopropane	157	Aziridine	209
Acetic acid propyl ester	364	Aminoethane	197	B2A	68
Acetic acid sec butyl ester	59	2-Aminoethanol	190	BCHD	329
Acetic acid-o-trimethyl ester	417	Aminoethylene	209	Benzenamine	32
Acetic acid vinyl ester	431	1-Amino-2-ethylhexane	215	Benzene	36
Acetic aldehyde	1	Aminohexahydrobenzene	109	Benzene chloride	92
Acetone	3	1-Aminohexane	248	Benzene tetrahydride	107
Acetone dimethylacetal	153	Aminomethane	276	Benzol	36
Acetonitrile	4	3-Aminomethyl heptane	215	Bicyclo(2.2.1)hepta-2,5-diene	329
Acetophenone	5	1-Amino-2-methylpropane	66	cis-Bicyclo(4.4.0)decane	114
1-Acetoxy-2-butoxyethane	57	2-Amino-2-methylpropane	69	Bicycloheptadiene	329
1-Acetoxyethylene	431	1-Aminopentane	26	Bicyclohexyl	136
1-Acetoxypropane	364	1-Aminopropane	366	Biethylene	42
2-Acetoxypropane	363	2-Aminopropane	365	Bis(2-ethoxyethyl)-ether	143
Acetyl acetone	6	3-Aminoprop-1-ene	14	Bis(2-methoxyethyl)-ether	144
Acetyl benzene	5	3-Aminopropyl dimethylamine	157	Bis(methoxypropyl)ether	178
Acetylchloride	7	1-Amino propylene	14	Bis(trimethylsiloxy)methylsilane	234
p-Acetyldehyde	337	Ammonia	20	Bis-trimethylsilyl-amine	240
Acetyl dimethylamine	154	AMS	317	1,2-Bis-(dimethyl amino)-ethane	398
Acetylene	8	i-Amyl acetate	21	BMA	81
2-Acetyl propane	309	n-Amyl acetate	22	Boroethane	121
ACN	11	Amyl acetic ester	22	Boron bromide	37
Acroleic acid	10	3-Amyl alcohol	344	Boron chloride	38
Acrolein	9	i-Amyl alcohol	23	Boron fluoride	39
Acrylic acid	10	n-Amyl alcohol	24	Boron hydride	121
Acrylic acid ethyl ester	196	tert-Amyl alcohol	25	Boron tribromide	37
Acrylic acid methyl ester	274	n-Amylamine	26	Boron trichloride	38
Acrylic aldehyde	9	Amyl carbinol	243	Boron trifluoride	39
Acrylo-i-butylic ester	63	Amyl chloride	28	Boron trimethyl	421
Acrylo-tert-butylic ester	65	i-Amylchloride	27	Bromine	40
Acrylobutylic ester	64	n-Amylchloride	28	Bromoallylene	15
Acrylonitrile	11	n-Amylene	345	Bromoethane	199
Adipic ketone	111	Acetic acid i-amylester	21	Bromoethyl	199
Aetyl-2-propanone	6	Acetic acid n-amyl ester	22	Bromomethane	278
AGE	17	Ethyl tert-amyl ether	29	3-Bromopropene	15
Allyl acetate	12	tert-Amyl ethyl ether	29	BTBAS	70

Substance	No.	Substance	No.	Substance	No.
BuAc	61	tert-Butylamine	69	i-Butyric aldehyde	83
1,2-Butadiene	41	Bis(tert-butylamino)silane	70	n-Butyric aldehyde	84
1,3-Butadiene	42	tert-Butyl arsine	71	Butyronitrile	85
1,3-Butadiene monoxide	43	N-Butyl-1-butanamine	122	n-Butyronitrile	85
i-Butanal	83	i-Butyl-i-butyrate	72	C11	430
n-Butanal	84	i-Butyl carbinol	23	C4=	51
i-Butane	44	n-Butyl carbinol	24	C4=	52
n-Butane	45	sec-Butyl carbinol	281	C4==	42
1-Butane amine	67	Butyl carbonic acid	343	1-Caprylene	334
2-Butane amine	68	Butyl cellosolve	56	Carbinol	265
Butanenitrile	85	Butyl cellosolve acetate	57	Carbon dioxide	86
1-Butanethiol	79	Butylchloride	74	Carbonic acid anhydride	86
Butane-1-thiol	79	i-Butyl chloride	73	Carbonic acid diethyl ester	142
1-Butanol	48	n-Butyl chloride	74	Carbonic acid dimethyl ester	160
2-Butanol	46	tert-Butylchloride	75	Carbonic acid ethyl methyl ester	289
Butan-1-ol	48	tert-Butylcyclohexane	76	Carbonic anhydride	86
Butan-2-ol	46	1-Butylene	51	Carbonic oxide	87
i-Butanol	47	2-Butylene	52	Carbon monoxide	87
n-Butanol	48	i-Butylene	53	Carbon oxide	87
tert-Butanol	49	1,3-Butyleneglycol monomethyl ether	266	Carbon oxychloride	346
2-Butanone	292	Butylene oxide	187	Carbonyl chloride	346
Butan-2-one	292	1,2-Butylen oxide	187	Carboxyethane	358
2-Butenal	50	Acetic acid i-butylester	60	Carvene	261
1-Butene	51	Acetic acid tert-butyl ester	62	Cellosolve acetate	192
2-Butene	52	Acrylic acid tert-butylester	65	CG	346
But-1-ene	51	Formic acid i-butylester	77	CHA	109
i-Butene	53	Propenoic acid i-butylester	63	Chlorine	88
3-Butene-1-ol	54	i-Butyl ethanoate	60	Chlorine dioxide	89
Butenine	432	n-Butyl ethanoate	61	Chlorine peroxide	89
1-Buten-3-one	438	tert-Butyl ethanoate	62	Chlorine trifluoride	90
1-Buten-3-yne	432	Butyl ether	123	2-Chloroacetaldehyde	91
3-Butenyne-1	432	Butyl ethyl acetaldehyde	212	3-Chloroallyl chloride	134
Butenyne	432	Butyl ethylene	246	Chloroallylene	16
1-Butoxybutane	123	tert-Butyl ethyl ether	200	Chlorobenzene	92
1-tert-Butoxy-2,3-epoxypropane	55	i-Butyl formate	77	Chlorobenzol	92
2-Butoxyethanol	56	n-Butyl formate	78	1-Chlorobutane	74
2-Butoxyethanol acetate	57	tert-Butyl glycidyl ether	55	3-Chloro-2-butanone	93
2-Butoxyethyl acetate	57	n-Butyl glycol	56	1-Chlorobut-2-ene	94
1-Butoxy-2-hydroxy ethane	56	Butyl glycol acetate	57	3-Chloro-i-butene	275
tert-Butoxymethylloxirane	55	n-Butyl mercaptan	79	1-Chloro-1,1-difluoroethane	95
1-Butoxy-2-propanol	58	tert-Butyl mercaptan	80	Chlorodimethyl ether	98
1-Butoxypropan-2-ol	58	Butyl methacrylate	81	Chlorodimethylsilane	96
2-Butyl acetate	59	n-Butyl methacrylate	81	1-Chloro-2,3-epoxypropane	186
i-Butyl acetate	60	tert-Butyl methane	169	2-Chloro-1-ethanal	91
n-Butyl acetate	61	Butyl methanoate	78	Chloroethane	201
sec-Butyl acetate	59	tert-Butyl methyl ether	282	2-Chloroethan-1-ol	97
tert-Butyl acetate	62	Butyl methyl ketone	244	Chloroethanol	97
i-Butyl acrylate	63	i-Butyl methylketone	283	Chloroethene	433
n-Butyl acrylate	64	i-Butyl-2-methyl propanoate	72	Chloroethyl	201
tert-Butyl acrylate	65	Butyl oxitol	56	2-Chloroethyl alcohol	97
i-Butyl alcohol	47	Butyl-2-propenoate	64	Chloroethylene	433
n-Butyl alcohol	48	tert-Butylpropenoate	65	1-Chloroethyl methyl ketone	93
sec-Butyl alcohol	46	2-Butyne	82	Chloroformic acid ethyl ester	202
tert-Butyl alcohol	49	But-2-yne	82	Chloroformic acid methyl ester	286
Butyl aldehyd	84	i-Butyraldehyde	83	Chloroformyl chloride	346
i-Butyl amine	66	n-Butyraldehyde	84	Chloromethane	285
n-Butylamine	67	Butyric acid aldehyde	84	Chloromethoxymethane	98
sec-Butylamine	68	Butyric acid anitrile	85	Chloromethyl	285

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Substance	No.	Substance	No.	Substance	No.
1-Chloro-2-methylbenzene	101	Cyclopentane	110	1,2-Dichloropropane	132
1-Chloro-3-methylbutane	27	Cyclopentane-1-amine	112	1,3-Dichloro-2-propanol	133
Chloromethyl methylether	98	Cyclopentanone	111	1,3-Dichloro-i-propanol	133
Chloromethyl oxirane	186	Cyclopentylamine	112	1,3-Dichloropropene	134
1-Chloro-2-methylpropane	73	Cyclopropane	113	1,3-Dichloropropylene	134
2-Chloro-2-methylpropane	75	Cylohexane amine	109	Dichlorosilane	135
3-Chloro-2-methylprop-1-ene	275	D6	184	Dicyclohexyl	136
1-Chloropentane	28	DC244 Fluid	331	1,3-Dicyclopentadiene	137
1-Chloropropane	369	DC 246 Fluid	184	Dideuterium	118
2-Chloropropane	368	DCM	131	Diethenyl benzene	182
2-Chloropropene	99	1,3-DCP	133	1,1-Diethoxyethane	138
3-Chloro-1-propene	16	DCP	134	Diethoxy formic acid anhydride	142
2-Chloropropylene	99	DCS	135	Diethoxy methyl silane	139
3-Chloropropylene	16	DEA	140	Diethylacetal	138
2-Chloropropylene oxide	186	DEC	142	Diethylamine	140
Chlorosulfonic acid	100	cis-Decahydronaphthalene	114	N,N-Diethylamine	140
Chlorosulfuric acid	100	cis-Decaline	114	2-Diethylaminoethanol	145
2-Chlorotoluene	101	Decamethyl cyclopentasiloxane	115	2-Diethylaminoethyl alcohol	145
o-Chlorotoluene	101	n-Decane	116	1,2-Diethylbenzene	141
Chlorotrifluoride	90	1-Decene	117	o-Diethylbenzene	141
CHO	108	n-Decylene	117	Diethyl carbinol	344
Cinnamene	383	DEGDEE	143	Diethylcarbitol	143
CMME	98	DEGDME	144	Diethyl carbonate	142
Colamine	190	DEK	147	Diethyldiglycol	143
CP	110	DEMS	139	Diethylene dioxide	174
Crotonaldehyde	50	Deuterium	118	Diethylene ether	174
Crotonic aldehyde	50	Diacetone alcohol	119	Diethylene glycol diethylether	143
Crotonylene	82	Diacetylmethane	6	Diethylene monoxide	390
Crotyl chloride	94	Diamine	249	Diethylene oximide	320
Cumene	102	1,2-Diaminoethane	207	Diethyleneglycol dimethylether	144
Cumol	102	1,2-Diaminopropane	372	N,N-Diethylethanamine	412
Cyanoethylene	11	Di-i-amyl ether	120	N,N-Diethylethanolamine	145
Cyanomethane	4	Diazane	249	Diethyl ether	146
1-Cyanopropane	85	Diborane	121	Diethyl ketone	147
Cyclobutane	103	Diboron hexahydride	121	Diethylmethylmethane	304
(Methylethyl)cyclohexane	370	Di-n-butylamine	122	Diethyl oxide	146
Cyclohexane	104	Dibutylamine	122	Diethylsulfide	148
Cyclohexanol	105	N,N-Dibutyl-1-butanamine	406	Diethyl thioether	148
Cyclohexanone	106	Di-i-butylene	424	Difluoro chloroethane	95
Cyclohexatriene	36	Di-n-butylether	123	1,1-Difluoroethane	149
Cyclohexene	107	Dibutylether	123	Difluoromethane	150
3-Cyclohexene-1-aldehyde	389	Dibutyl ketone	328	Diglyme	144
3-Cyclohexene-1-carbaldehyde	389	Di-tert-butyl peroxide	124	Dihexyl	185
Cyclohexene oxide	108	N,N'-Di-tert-butylsilane diamine	70	Dihydro-1,3-dioxol	175
Cyclohexenylethylene	435	1,2-Dichlorobenzene	125	Dihydrogen dioxide	256
Cyclohexyl alcohol	105	ortho-Dichlorobenzene	125	Dihydrogen selenide	257
Cyclohexylamine	109	o-Dichlorobenzol	125	3,4-Dihydro-2-methoxypyrene	268
Cyclohexyl cyclohexane	136	1,1-Dichloroethane	126	1,2-Dihydroxyethane	208
N-Cyclohexyl dimethyl amine	161	1,2-Dichloroethane	127	Diisoamyl ether	120
Cyclohexylethene	434	1,1-Dichloroethene	128	a-Disobutylene	424
Cyclohexylethylene	434	1,2-Dichloroethene trans	129	Diisopentyl ether	120
Cyclohexyl ketone	106	1,1-Dichloroethylene	128	Diisopropylamine	176
Cyclohexylmethane	287	1,2-Dichloroethylene trans	129	Diisopropylether	179
2-Cyclohexyl-2-methyl propane	76	1,1-Dichloro-1-fluoroethane	130	Diisopropyl oxide	179
2-Cyclohexylpropane	370	1,3-Dichlorohydrin	133	Dimazine	167
Cyclomethicone	115	1,3-Dichloro-2-hydroxypropane	133	Dimethoxy dipropylene glycol	178
Cyclomethicone 6	184	1,3-Dichloroisopropyl alcohol	133	1,2-Dimethoxyethane	151
Cyclopentadiene dimere	137	Dichloromethane	131	Dimethoxy formic acid anhydride	160

Substance	No.	Substance	No.	Substance	No.
Dimethoxymethane	152	N,N-Dimethyl methanamide	154	DME	163
2,2-Dimethoxypropane	153	N,N-Dimethylmethanamide	165	DMEA	164
Dimethyl	188	N,N-Dimethylmethanamine	418	DMF	165
N,N-Dimethyl acetamide	154	Dimethyl methane	352	DMIPA	171
1,1-Dimethyl acetone	309	Dimethylnitromethane	326	DMK	3
Dimethylacetone	147	2,4-Dimethyl-3-oxa-2,4-disilapentane	396	DMPA	172
Dimethyl acetylene	82	Dimethyl oxide	163	DMS	173
Dimethylamine	155	2,3-Dimethylpentane	168	DMSC	96
Dimethylamino cyclohexane	161	N,N-Dimethyl-1-propanamine	172	DnBA	122
2-Dimethylaminoethanol	156	N,N-Dimethyl-1,3-propandiamine	157	Dodecamethyl cyclohexasiloxane	184
1-Dimethyl aminopropane	171	2,2-Dimethyl propane	169	i-Dodecane	341
1-Dimethylaminopropan-2-ol	170	N,N-Dimethyl-1-propane amine	171	n-Dodecane	185
Dimethylaminopropylamine	157	N,N-Dimethyl-i-propanolamine	170	DPDME	178
1,2-Dimethylbenzene	442	Dimethylpropylamine	172	DPGME	271
1,3-Dimethylbenzene	441	N,N-Dimethyl-i-propylamine	171	DS	181
1,4-Dimethylbenzene	443	N,N-Dimethyl-n-propyl amine	172	DTBP	124
2,2-Dimethylbutane	158	1,1-Dimethylpropyl ethyl ether	29	DVB	182
2,3-Dimethylbutane	159	Dimethylpropylmethane	303	DVE	183
1,3-Dimethyl butanol	305	1,1-Dimethyl propylmethyl ether	31	DVTMDS	397
Di-3-methylbutyl ether	120	Dimethylsilyl chloride	96	ECH	186
Dimethylbutylmethane	296	Dimethyl sulfide	173	EDA	207
Dimethyl carbinol	353	Dioform trans	129	EDC	127
Dimethyl carbitol	144	1,4-Dioxa cyclohexane	174	EGBE	56
Dimethyl carbonate	160	1,3-Dioxa cyclopentane	175	EGBEA	57
Dimethylchloroether	98	2,5-Dioxahexane	151	EGDME	151
Dimethylchlorosilane	96	1,4-Dioxane	174	EGEE	191
N,N-Dimethyl cyclohexyl amine	161	p-Dioxane	174	EGEEA	192
N,N-Dimethyl-1,3-diaminopropane	157	1,3-Dioxolane	175	EGiPE	361
Dimethyl diglycol	144	DIPA	176	EGME	269
Dimethyl dimethoxy methane	153	Di-i-pentyl ether	120	EGnPE	360
Dimethyl disulfide	162	Diplogen	118	2-EHA	213
Dimethylenediamine	207	Di-i-propyl	159	EMA	219
Dimethylene oxide	210	Di-i-propylamine	176	EMC	289
N,N-Dimethylethanamine	164	Di-n-propylamine	177	ENB	216
1,1-Dimethylethane	44	Dipropylamine	177	EO	210
1,1-Dimethyl ethanethiol	80	Dipropylene glycol dimethyl ether	178	Epichlorohydrin	186
1,1-Dimethylethanol	49	Dipropylene glycol methyl ether	271	1,2-Epoxy-3-allyloxypropane	17
N,N-Dimethylethanolamine	156	Dipropylene glycol monomethyl ether	271	1,4-Epoxy-1,3-butadiene	228
Dimethylether	163	Di-i-propyl ether	179	1,2-Epoxybutane	187
Dimethyl ethinyl carbinol	284	Di-n-propyl ether	180	1,4-Epoxybutane	390
(1,1-Dimethylethyl)cyclohexane	76	Dipropyl ether	180	3,4-Epoxybut-1-ene	43
Bis(1,1-dimethylethyl)peroxide	124	N,N-Dipropyl-1-propanamine	428	1,2-Epoxy cyclohexane	108
1,1-Dimethylethylamine	69	Disilane	181	1,2-Epoxyethane	210
Dimethylethylamine	164	2,3-Dithiabutane	162	1,2-Epoxy propane	373
1,1-Dimethylethyl arsine	71	Divinyl	42	2,3-Epoxypropylchloride	186
Dimethyl ethyl carbinol	25	Divinyl benzene	182	EPP	220
1,1-Dimethylethylene	53	Divinylene oxide	228	Erythrene	42
1,2-Dimethylethylene	52	Divinylether	183	ETBE	200
1,1-Dimethylethyl glycidyl ether	55	Divinyloxide	183	ETFBO	194
Dimethylformamide	165	1,3-Divinyl-1,1,3,3-tetramethyldisilazane	397	Ethanal	1
N,N-Dimethylformamide	165	1,3-Divinyltetramethyldisilazane	397	Ethane	188
Dimethylglycol	151	DMA	155	Ethane amine	197
3,4-Dimethyl hexane	166	DMAC	154	Ethancarboxylic acid	358
1,1-Dimethylhydrazine	167	DMAPA	157	1,2-Ethanediamine	207
N,N-Dimethylhydrazine	167	DMC	160	Ethane dichloride	127
unsym-Dimethylhydrazine	167	DMCHA	161	1,2-Ethandiol	208
N,N-Dimethyl-2-hydroxyethylamine	156	DMCPS	115	Ethane-1,2-diol	208
Dimethyl ketone	3	DMDS	162	Ethanethiol	218

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Substance	No.	Substance	No.	Substance	No.
Ethanoic acid	2	Ethyl diglyme	143	4-Ethyl-2-methylhexane	291
Ethanoic acid ethyl ester	195	N-Ethyl dimethylamine	164	Ethyl methyl ketone	292
Ethanoic acid methyl ester	273	Ethyl-1,1-dimethyl ethyl ether	200	Ethyl-2-methyl-2-propenoate	219
Ethanoic acid propyl ester	364	Ethyl dimethyl methane	279	Ethyl nitrile	4
Ethanol	189	Ethyl-1,1-dimethylpropyl ether	29	Ethyl orthosilicate	386
Ethanol amine	190	Ethylene	206	Ethyl oxirane	187
Ethanoyl chloride	7	Ethylenecarboxylic acid	10	Ethylpentamethylene	205
Ethene	206	Ethylene chloride	127	1-Ethylpiperidine	220
Ethenyl acetate	431	Ethylene chlorohydrin	97	N-Ethylpiperidine	220
Ethenyl benzene	383	Ethylene cyanide	11	Ethyl propanoate	221
Ethenylcyclohexane	434	Ethylenediamine	207	1-Ethyl-1-propanol	344
4-Ethenyl-1-cyclohexene	435	Ethylene dichloride	127	Ethyl propenoate	196
Ethenyl ethanoate	431	Ethylene glycol	208	Ethylpropionate	221
1-Ethenyl-3-methylbenzene	315	Ethylene glycol dimethyl ether	151	Ethylpropylether	222
1-Ethenyl-4-methylbenzene	316	Ethylene glycol monobutyl ether	56	Ethylpropylketone	245
Ethenyl methylether	437	Ethylene glycol monobutyl ether acetate	57	Ethyl silicate	386
Ethenyl oxirane	43	Ethylene glycol monoethyl ether	191	Ethyl sulfhydrate	218
Ethenyloxyethene	183	Ethylene glycol monoethyl ether acetate	192	Ethyl vinyl ether	223
2-Ethenylpyridine	439	Ethylene glycol monomethyl ether	269	Ethyne	8
Ethenyltrimethoxysilane	440	Ethylene glycol monopropyl ether	360	Ethynyl carbinol	355
Ethine	8	Ethylene imine	209	EtM	218
Ethynyl dimethyl carbinol	284	Ethylene oxide	210	EtOH	189
Ethoxycarbonyl chloride	202	Ethylene trichloride	408	EVE	223
Ethoxy ethane	146	N-Ethylethane amine	140	Fluorine	224
2-Ethoxyethanol	191	Ethyl ethanoate	195	Fluorobenzene	225
2-Ethoxyethanol acetate	192	Ethyl ether	146	Fluoroethene	436
Ethoxyethene	223	Ethylethylene	51	Fluoroethylene	436
2-Ethoxyethyl acetate	192	Ethyl formate	211	Fluoromethane	294
Acetic acid 2-ethoxyethyl ester	192	Ethylformic acid	358	Formal	152
2-Ethoxy-2-methyl butane	29	Ethyl glycol	191	Formal	152
2-Ethoxy-2-methyl propane	200	Ethyl glycol acetate	192	Formaldehyde	226
1-Ethoxypropane	222	2-Ethylhexaldehyde	212	Formaldehyde dimethylacetal	152
1-Ethoxy-2-propanol	193	Ethylhexamethylene	204	Formaldehyde ethylene acetal	175
1-Ethoxypropan-2-ol	193	2-Ethyl-1-hexanal	212	Formic acid	227
4-Ethoxy-1,1,1-trifluoro-3-buten-2-one	194	2-Ethylhexanal	212	Formic acid butyl ester	78
Ethoxy trifluoro butenone	194	2-Ethyl-1-hexanamine	215	Formic acid dimethylamide	165
Ethyl acetate	195	2-Ethylhexanoic acid	213	Formic acid ethyl ester	211
1-Ethyl acetone	308	2-Ethylhexoic acid	213	Formic acid methyl ester	295
Ethyl acrylate	196	Acrylic acid (2-ethylhexyl)ester	214	Formic acid propylester	374
Ethyl alcohol	189	2-Ethylhexyl acrylate	214	Formic acid-o-triethyl ester	411
Ethyl aldehyde	1	2-Ethyl-1-hexylamine	215	Formic acid-o-trimethyl ester	415
Ethylamine	197	2-Ethylhexylamine	215	Formonitrile	253
Ethylbenzene	198	2-Ethylhexyl-2-propenoate	214	4-Formyl-1-cyclohexene	389
Ethylbenzol	198	Ethyllic acid	2	N-Formyldimethylamine	165
Ethylbromide	199	5-Ethylidenebicyclo(2.2.1)hept-2-ene	216	Fural	229
Ethyl-tert-butylether	200	Ethylidene chloride	126	2-Furaldehyde	229
2-Ethyl caproaldehyde	212	Ethylidene diethyl ether	138	Furan	228
2-Ethylcaproic acid	213	Ethylidene fluoride	149	2-Furancarbinol	230
Ethyl carbinol	354	5-Ethylidene-2-norbornene	216	2-Furancarboxyaldehyde	229
Ethyl cellosolve	191	Ethylidene norbornene	216	Furfural	229
Ethylchloride	201	5-Ethylidene-8,9,10-trinorborn-2-ene	216	Furfur alcohol	230
Ethyl chlorocarbonate	202	Ethyl lactate	217	Furfuraldehyde	229
Ethyl chloroformate	202	Ethyl mercaptan	218	Furfuran	228
Ethyl chloromethanoate	202	Ethyl methacrylate	219	Furfuryl alcohol	230
Ethylcyclobutane	203	Ethyl methanoate	211	2-Furylmethanal	229
Ethylcyclohexane	204	Ethyl methyl acrylate	219	2-Furylmethanol	230
Ethylcyclopentane	205	Ethyl methyl carbonate	289	Germane	231
Ethylcyclohexane	205	Ethylmethyl ether	290	Germanium hydride	231
Ethylcyclohexane	205				

Substance	No.	Substance	No.	Substance	No.
Germanium tetrachloride	232	Hex-2-en	247	iC12	341
Germanium tetrafluoride	233	1-Hexene	246	iC4=	53
Germanium tetrahydride	231	2-Hexene	247	Iodomethane	299
Germanomethane	231	Hex-1-ene	246	IPA	353
Glyceryl trichlorohydrin	409	Hexone	283	IPC	368
Glycidyl allyl ether	17	Hexyl alcohol	243	iPM	375
Glycidyl-tert-butyl ether	55	n-Hexylamine	248	Isoamyl acetate	21
Glycol	208	Hexylene	246	Isoamyl alcohol	23
Glycol chlorohydrin	97	Hexyl hydride	242	Isoamylchloride	27
Glycol dimethylether	151	HF-A	254	Isoamyl ether	120
Glycol monobutyl ether acetate	57	HFC-1234ze	388	Isoamyl formate	30
Glycol monomethyl ether	269	HFC 365mfc	339	Isoamyl hydride	279
Halon 10001	299	HFO-1234ze	388	Isoamyl methyl ketone	277
HCFC 141b	130	HMCTS	239	Isobutanal	83
HCFC 142b	95	HMDS	240	Isobutane	44
Heavy Hydrogen	118	HMDSO	241	Isobutanol	47
Hendecane	430	Hydralin	105	Isobutene	53
1.1.1.3.5.5.5-Heptamethyltrisiloxane	234	Hydrazine	249	Isobutenyl methyl ketone	262
Heptamethyl trisiloxane	234	Hydrobromic acid	251	Isobutyl acetate	60
i-Heptane	297	Hydrochloric acid	252	Isobutyl acrylate	63
i-Heptane	296	Hydrocyanic acid	253	Isobutyl alcohol	47
i-Heptane	168	Hydrofluoric acid	254	Isobutyl amine	66
n-Heptane	235	Hydrogen	250	Isobutyl carbinol	23
3-Heptane carboxylic acid	213	Hydrogen arsenide	35	Isobutyl chloride	73
1-Heptanol	236	Hydrogen bromide	251	Isobutylene	53
Heptan-1-ol	236	Hydrogen carboxylic acid	227	Isobutyl ethanoate	60
2-Heptanone	237	Hydrogen chloride	252	Isobutyl formate	77
Heptan-2-one	237	Hydrogen cyanide	253	Isobutyl isobutyrate	72
1-Heptene	238	Hydrogen dioxide	256	Isobutyl methylketone	283
Hept-1-ene	238	Hydrogen fluoride	254	Isobutyl-2-methyl propanoate	72
Heptyl alcohol	236	Hydrogen iodide	255	Isobutyraldehyde	83
1-Heptylene	238	Hydrogen nitrate	322	Isobutyric acid isobutyl ester	72
Hexahydroaniline	109	Hydrogen peroxide	256	Isobutyric aldehyde	83
Hexahydrobenzene	104	Hydrogen phosphide	347	Isododecane	341
Hexahydrocumene	370	Hydrogen selenide	257	Isodurene	395
Hexahydro-N,N-dimethyl aniline	161	Hydrogen sulfide	258	Isoheptane	297
Hexahydrophenol	105	Hydroiodic acid anhydrous	255	Isoheptane	296
Hexahydropyridine	351	Hydroperoxide	256	Isoheptane	168
Hexahydrostyrene	434	Hydrosulfuric acid	258	Isohexane	304
Hexahydrotoluene	287	1-Hydroxy-2-aminobutane	19	Isohexane	303
Hexalin	105	1-Hydroxybutane	48	Isononane	400
Hexamethyl cyclotrisiloxane	239	2-Hydroxybutane	46	Isononane	422
Hexamethyldisilazane	240	1-Hydroxy-2-butylamine	19	Isononane	291
Hexamethyldisiloxane	241	Hydroxycyclohexane	105	Isooctane	423
Hexamethylene	104	2-Hydroxyethanol	208	Isooctane	166
1-Hexanamine	248	2-Hydroxyethylamine	190	Isooctylamine	215
Hexanaphthene	104	Propanoic acid 2-hydroxy ethylester	217	Isopentane	279
Hexanaphthylene	107	1-Hydroxyheptane	236	Isopentanoic acid	280
i-Hexane	304	1-Hydroxyhexane	243	Isopentanol	23
i-Hexane	303	4-Hydroxy-2-keto-4-methylpentane	119	Isopentanol	281
n-Hexane	242	2-Hydroxymethylfuran	230	Isopentyl acetate	21
1-Hexanol	243	4-Hydroxy-4-methyl-2-pentanone	119	Isopentyl alcohol	23
Hexan-1-ol	243	3-Hydroxypropene	13	Isopentylchloride	27
2-Hexanone	244	Hydroxypropionic acid ethyl ester	217	Isopentyl ether	120
3-Hexanone	245	2-Hydroxy triethylamine	145	Isopentyl formate	30
Hexan-2-one	244	Hydroxytrimethylsilane	426	Isopentyl methyl ketone	277
Hexan-3-one	245	IBA	47	Isoprene	259
Hexanone	106	i-Butyric acid i-butylester	72	Isopropanol	353

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Substance	No.	Substance	No.	Substance	No.
Isopropenyl acetate	356	Methane	264	2-Methyl-1.3-butadiene	259
Isopropenyl benzene	317	Methanecarbonitrile	4	1-Methylbutadiene trans	338
Isopropenyl chloride	99	Methanecarboxylic acid	2	2-Methylbutane	279
4-Isopropenyl-1-methyl cyclohexene	261	Methanethiol	300	3-Methylbutanoic acid	280
Isopropoxyethanol	361	Methanoic acid	227	2-Methyl-1-butanol	281
2-Isopropoxy propane	179	Methanoic acid ethyl ester	211	2-Methylbutan-2-ol	25
Isopropyl acetate	363	Methanoic acid methyl ester	295	3-Methylbutan-1-ol	23
Isopropyl acetone	283	Methanoic acid propylester	374	3-Methyl butan-2-one	309
Isopropyl alcohol	353	Methanol	265	3-Methyl-2-butanone	309
Isopropylamine	365	2-MeTHF	318	Methyl-i-butenyl ketone	262
Isopropyl benzene	102	1-Methoxy-2-acetoxypropane	272	3-Methyl butyl acetate	21
Isopropyl carbinol	47	Methoxybenzene	33	2-Methyl butylacrylate	81
Isopropyl chloride	368	3-Methoxy-1-butanol	266	2-Methyl butyl alcohol	281
Isopropylcyclohexane	370	3-Methoxybutanol	266	Methyl-i-butyl carbinol	305
Isopropyl ether	179	Methoxycarbonyl chloride	286	Methyl-i-butylene ketone	262
Isopropyl glycol	361	Methoxycarbonylethylene	274	Methyl-tert-butyl ether	282
Isopropylidene acetone	262	p-Methoxy cyclohexanone	267	3-Methyl-1-butylformate	30
Isopropyl mercaptan	375	4-Methoxy cyclohexanone	267	Methyl butyl ketone	244
Isopropyl methylketone	309	2-Methoxy-3.4-dihydropyran	268	Methyl-i-butylketone	283
Isopropyl nitrate	377	Methoxy dihydropyran	268	2-Methyl-3-butyn-2-ol	284
Isopropyl oxitol	361	Methoxy ethane	290	3-Methyl butynol	284
Isovaleric acid	280	2-Methoxyethanol	269	3-Methylbutyric acid	280
Ketocyclopentane	111	Methoxyethene	437	Methylcarbinol	189
Ketohexamethylene	106	1-Methoxy-2-hydroxypropane	270	Methyl cellosolve	269
Keto pentamethylene	111	Methoxy methane	163	Methyl chloride	285
Ketopropane	3	2-Methoxy-2-methyl butane	31	Methyl chlorocarbonate	286
Lactic acid ethyl ester	217	Methoxy methylchloride	98	Methyl chloroform	407
Lead tetraethyl	260	(2-Methoxymethylethoxy)-1-propanol	271	Methyl chloroformate	286
(R)-(+)-Limonene	261	(2-Methoxymethylethoxy)propanol	271	Methyl chloromethanoate	286
D-Limonene	261	2-Methoxy-1-methylethyl acetate	272	Methylchloromethyl ether	98
MA	276	2-Methoxy-2-methyl propane	282	Methyl cyanide	4
MAK	237	1-Methoxypropane	307	Methylcyclohexane	287
MBK	244	1-Methoxy-2-propanol	270	2(4-Methylcyclohex-3-ene-1-yl)propan-2-ol	385
MCB	92	Methoxy propoxy propanol	271	Methylcyclopentane	288
MCH	287	1-Methoxy-2-propyl acetate	272	Methyl diethoxy silane	139
MCP	288	Methylacetaldehyde	357	Methyl dipropylene glycol	271
MDHP	268	Methyl acetate	273	Methylene acetone	438
Mel	299	Methylacetic acid	358	Methylene chloride	131
MEK	292	Methylacetic anhydride	359	Methylene dichloride	131
MeM	300	Methyl acetone	292	Methylene fluoride	150
p-Mentha-1.8-diene	261	Methyl acetylene	378	Methylene glycol dimethyl ether	152
4-Menth-1-ene-8-ol	385	Methyl acrylate	274	Methylene oxide	226
MeOH	265	α-Methylacrylic acid	263	4.7-Methylenetetrahydro indene	137
1-Mercaptobutane	79	Methylal	152	Methyl ethanoate	273
Mercaptoethane	218	Methyl alcohol	265	Methylethene	371
Mercaptomethane	300	Methyl aldehyde	226	(1-Methyl ethenyl)benzene	317
1-Mercaptopropane	376	Methylallene	41	Methyl ether	163
Mesitylene	420	2-Methylallyl chloride	275	2-Methyl-2-ethoxy butane	29
Mesityl oxide	262	Methylallylchloride	275	2-Methyl-2-ethoxy propane	200
Metaformaldehyde	427	Methylamine	276	Methyl ethyl carbinol	46
Methacetone	147	4-Methyl-2-amyl alcohol	305	Methyl ethyl carbonate	289
Methacrylic acid	263	Methyl-tert-amylether	31	Methylethylene	371
Methacrylic acid allyl ester	18	Methyl amyl ketone	237	Methyl ethylene oxide	373
Methacrylic acid butylester	81	Methyl-i-amyl ketone	277	Acetic acid 1-methylethyl ester	363
Methacrylic acid ethylester	219	Methyl benzene	405	Nitric acid 1-methylethylester	377
Methacrylic acid methyl ester	301	Methyl benzol	405	Methylethyl ether	290
Methylal chloride	275	Methylbis(trimethylsiloxy)silane	234	2-Methyl-4-ethylhexane	291
Methanal	226	Methyl bromide	278	Methyl ethyl ketone	292

Substance	No.	Substance	No.	Substance	No.
Methylethylmethane	45	2-Methylpropan-2-ol	49	MMA	301
1-Methylethyl-2-propanamine	176	Methyl propanone	292	MMH	298
Methylethyl sulfide	293	2-Methylprop-1-ene	53	MMS	314
Methylfluoride	294	2-Methylpropene	53	MO	262
Methylfluoroform	413	Methyl propenoate	274	MOB	33
Methyl formate	295	2-Methyl-2-propenoic acid	263	Monoamylamine	26
Methyl glycol	269	2-Methyl-2-propenoic acid butylester	81	Monobromoethane	199
2-Methylhexane	296	2-Methyl-2-propenoic acid ethylester	219	Monobromomethane	278
3-Methylhexane	297	2-Methyl-2-propenoic acid methyl ester	301	Monobutylamine	67
2-Methyl-5-hexanone	277	2-Methyl-2-propenyl-2-propenoate	18	Monobutyl glycol ether	56
5-Methyl-2-hexanone	277	Methylpropionate	306	Monochloroacetaldehyde	91
Methyl hydrazine	298	2-Methyl-2-propionic acid-2-propenyl ester	18	Monochlorobenzene	92
Methyl hydride	264	1-Methylpropyl acetate	59	Monochloroethane	201
Methylhydrogen diethoxy silane	139	2-Methylpropyl acetate	60	Monochloromethane	285
Methyl iodide	299	2-Methyl propyl acrylate	63	Monoethylamine	197
Methyl isobutyl carbinol	305	1-Methyl propylamine	68	Monoethyl glycol ether	191
Methyl isobutyl ketone	283	2-Methylpropyl amine	66	Monofluorobenzene	225
1-Methyl-4-isopropenyl-1-cyclohexene	261	2-Methyl-i-propyl arsine	71	Monoglyme	151
1-Methyl-4-isopropyl-1-cyclohexene-8-ol	385	2-Methylpropyl-i-butyrate	72	Monomethylamine	276
Methyl mercaptan	300	2-Methylpropyl chloride	73	Monomethyl glycol ether	269
Methyl methacrylate	301	1-Methyl propylene glycol-2	270	Monomethylhydrazine	298
N-Methylmethanamine	155	Methyl-n-propylether	307	Monomethylsilane	314
Methylmethane	188	Methylpropylether	307	Monosilane	380
Methyl methanoate	295	2-Methylpropyl formate	77	Morpholine	320
2-Methyl-2-methoxybutane	31	Methyl propyl ketone	308	MPK	308
2-Methyl-2-methoxy propane	282	Methyl-i-propyl ketone	309	MTBE	282
Methyl-2-methyl-2-propenoate	301	2-Methylpyridine	310	MTMS	319
4-Methyl morpholine	302	3-Methylpyridine	311	Muriatic acid	252
N-Methyl morpholine	302	1-Methyl pyrrole	312	MVK	438
Methyl orthosilicate	399	1-Methyl-1H-pyrrole	312	Naphthalene	321
4-Methyl-3-oxa-1-pentanol	361	N-Methyl pyrrole	312	cis-Naphthane	114
Methyloxirane	373	1-Methyl-2-pyrrolidinone	313	Naphthene	104
Methyl oxitol	269	1-Methyl-2-pyrrolidone	313	Naphthyl hydride	321
Methylpentamethylene	288	N-Methyl-2-pyrrolidone	313	NBA	48
2-Methyl pentane	303	N-Methylpyrrolidone	313	NBC	74
3-Methyl pentane	304	Methylsilane	314	NBM	79
4-Methyl-2-pentanol	305	2-Methyl-2-silapropane	425	Neohexane	158
4-Methylpentan-2-ol	305	Methyl silicate	399	Neopentane	169
2-Methyl-2-pentanol-4-one	119	3-Methylstyrene	315	Nitric acid	322
4-Methyl-2-pentanone	283	4-Methylstyrene	316	Nitric oxide	325
4-Methyl-3-penten-2-one	262	a-Methyl styrene	317	Nitroethane	323
4-Methylpent-3-en-2-one	262	m-Methylstyrene	315	Nitrogen dioxide	324
4-Methyl-2-pentyl alcohol	305	p-Methylstyrene	316	Nitrogen monoxide	325
Methyl-tert-pentylether	31	Methyl sulfhydrate	300	Nitrogen peroxide	324
Methyl pentyl ketone	237	2-Methyltetrahydrofuran	318	Nitrogen tetroxide	324
Methyl phenyl ether	33	Methylthioethane	293	2-Nitropropane	326
1-Methyl-1-phenylethylene	317	Methyl thiomethane	173	Nitro-i-propane	326
Methylphenylketone	5	Methyltrimethoxysilane	319	NMM	302
2-Methyl propanal	83	1-Methylvinyl acetate	356	NMP	313
2-Methylpropane	44	1-Methyl-3-vinylbenzene	315	i-Nonane	422
2-Methyl-1-propane amine	66	1-Methyl-4-vinylbenzene	316	i-Nonane	291
2-Methyl-2-propane amine	69	Methylvinyl ether	437	i-Nonane	400
2-Methyl-2-propanethiol	80	Methylvinylketone	438	n-Nonane	327
2-Methylpropane-2-thiol	80	MFB	225	Nonan-5-on	328
Methylpropanoate	306	MiAK	277	5-Nonanone	328
1-Methyl propanol	46	MiBC	305	2,5-Norbornadiene	329
2-Methyl-1-propanol	47	MiBK	283	Norborna-2,5-diene	329
2-Methyl-2-propanol	49	MIPK	309	Norflurane	387

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Substance	No.	Substance	No.	Substance	No.
2-NP	326	1-Pentane amine	26	2-Picoline	310
NPA	354	Pentane-2,4-dione	6	3-Picoline	311
nPM	376	Pentanoic acid	343	Picoline	310
NTO	324	i-Pentanoic acid	280	m-Picoline	311
1,7-Octadiene	330	1-Pentanol	24	o-Picoline	310
Octa-1,7-diene	330	3-Pentanol	344	Pimelic ketone	106
Octamethyl cyclotetrasiloxane	331	Pentan-1-ol	24	2-Pinene	350
Octamethyl trisiloxane	332	Pentan-3-ol	344	a-Pinene	350
i-Octane	166	i-Pentanol	23	PIP	351
i-Octane	423	i-Pentanol	281	Piperidine	351
n-Octane	333	n-Pentanol	24	Piperylene	338
i-Octanoic acid	213	tert-Pentanol	25	Piperylene trans	338
1-Octene	334	2-Pentanone	308	PnPGE	362
i-Octylamine	215	3-Pentanone	147	PO	373
1-Octylene	334	Pentan-2-one	308	POCL	348
ODCB	125	Pentan-3-one	147	Propanal	357
Olefiant gas	206	1-Pentene	345	1-Propanamine	366
OMCTS	331	i-Pentyl acetate	21	2-Propanamine	365
OMTSO	332	n-Pentyl acetate	22	Propane	352
7-Oxabicyclo(4.1.0)heptane	108	n-Pentyl alcohol	24	Propane-1,2-diamine	372
Oxacyclohexane	392	Pentylchloride	28	1,2-Propanediol-1-monomethyl ether	270
Oxacyclopentadiene	228	i-Pentylchloride	27	1-Propanethiol	376
Oxane	392	n-Pentylene	345	2-Propanethiol	375
Oxirane	210	Formic acid i-pentylester	30	Propanoic acid	358
Oxitol	191	Ethyl tert-pentyl ether	29	Propanoic acid anhydride	359
Oxol	228	tert-Pentyl ethyl ether	29	Propanoic acid ethylester	221
Oxomethane	226	i-Pentyl formate	30	Propanoic acid methylester	306
1,1'-Oxybis(2-ethoxy-ethane)	143	tert-Pentyl methyl ether	31	Propanoic anhydride	359
1,1'-Oxybis(2-methoxy-ethane)	144	i-Pentyl methyl ketone	277	1-Propanol	354
1,1'-Oxybis(3-methyl-butane)	120	Perhydronaphthalene	114	2-Propanol	353
Oxybis(methoxypropane)	178	PGEE	193	Propan-2-ol	353
1,1'-Oxybisbutane	123	PGME	270	i-Propanol	353
1,1'-Oxybisethane	146	PGMEA	272	n-Propanol	354
1,1'-Oxybisethene	183	Phenoxy methane	33	2-Propanone	3
1,1'-Oxybismethane	163	Phenylamine	32	Propan-2-one	3
1,1'-Oxybispropane	180	Phenyl chloride	92	Propargyl alcohol	355
2,2'-Oxybispropane	179	Phenylethane	198	2-Propenal	9
Oxygen	335	1-Phenylethanone	5	Propene	371
Ozone	336	Phenylethylene	383	2-Propene-1-amine	14
Paracetaldehyde	337	Phenyl fluoride	225	2-Propenenitrile	11
Paraldehyde	337	Phenyl hydride	36	1,2-Propene oxide	373
PCHO	337	Phenyl methane	405	Propenoic acid	10
PDA	372	Phenyl methyl ether	33	Propenoic acid butyl ester	64
PDC	132	Phenylmethylketone	5	Propenoic acid-1,1-dimethylethyl ester	65
(E)-1,3-Penadiene	338	1-Phenylpropane	367	2-Propenoic acid ethyl ester	196
1,3-Pentadiene trans	338	2-Phenyl propane	102	2-Propenoic acid-2-ethylhexyl ester	214
Penta-1,3-diene trans	338	2-Phenyl propene	317	2-Propenoic acid-2-methyl-2-propenyl ester	18
1,1,1,3,3-Pentafluoro butane	339	Phenyl trifluoromethyl ether	414	2-Propenoic acid-2-methylpropyl ester	63
1,1,1,3,3-Pentafluoropropane	340	Phosgene	346	2-Propen-1-ol	13
Pentafluoropropane	340	Phosphine	347	1-Propen-2-ol acetate	356
Pentamethylene	110	Phosphorus chloride	348	Propenyl acetate	12
Pentamethylene imine	351	Phosphorus chloride	349	i-Propenyl acetate	356
Pentamethylene oxide	392	Phosphorus hydride	347	Propenyl alcohol	13
2,2,4,6,6-Pentamethylheptane	341	Phosphorus oxychloride	348	2-Propenylamine	14
2,4-Pentandione	6	Phosphorus oxytrichloride	348	i-Propenyl benzene	317
i-Pentane	279	Phosphorus trichloride	349	i-Propenyl chloride	99
n-Pentane	342	Phosphorus trihydride	347	Acetic acid i-propenyl ester	356
tert-Pentane	169	Phosphoryl chloride	348	2-Propenyl methanoate	12

Substance	No.	Substance	No.	Substance	No.
Propine	378	i-Propylidene acetone	262	RC 270	113
Propionaldehyde	357	1-Propyl mercaptan	376	SBA	46
Propione	147	2-Propyl mercaptan	375	Selane	257
Propionic acid	358	i-Propyl mercaptan	375	Selenium hydride	257
Propionic acid anhydride	359	n-Propyl mercaptan	376	Sextone	106
Propionic acid ethylester	221	Propyl methyl ketone	308	Silaethane	314
Propionic aldehyde	357	i-Propyl methylketone	309	Silane	380
Propionic anhydride	359	i-Propyl nitrate	377	Silicane	380
2-Propoxyethanol	360	N-Propyl-1-propane amine	177	Silicic acid tetraethylester	386
i-Propoxyethanol	361	1-Propyne	378	Silicic acid tetramethylester	399
2-Propoxy-1-methyl ethanol	362	Propyne	378	Silicchloroform	410
1-Propoxypropane	180	2-Propyn-1-ol	355	Silico ethane	181
1-Propoxy-2-propanol	362	Prop-2-yn-1-ol	355	Silicon chloroform	410
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n-Propyl acetate	364	Pyridine	379	Silicon tetrachloride	381
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n-Propylbenzene	367	R134a	387	Sulfuric chlorohydrin	100
Propyl carbinol	48	R140a	407	Sulfurous dichloride	402
i-Propyl carbinol	47	R141b	130	Sulfurous oxide	384
n-Propylcarbonyl chloride	74	R142b	95	Sulfurous oxychloride	402
Propyl cellosolve	360	R143a	413	Sulfuryl oxychloride	100
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Propyl cyanide	85	R152a	149	TBA	49
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Propylene	371	R245fa	340	TBA _s	71
Propylene aldehyde	50	R270	132	TBGE	55
Propylene bromide	15	R280	369	tBM	80
Propylenechloride	16	R290	352	TCE	408
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Propylene glycol methylether acetate	272	R365	339	TEA	412
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Propylene glycol monomethyl ether	270	R40B1	278	Telone	134
Propylene glycol propyl ether	362	R41	294	TeMB	395
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Propylenglycol-1-butylether	58	R600	45	TEOF	411
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Acetic acid i-propyl ester	363	R610	146	Terpineol	385
Nitric acid i-propylester	377	R611	295	Tetrachlorogermane	232
Ethylene glycol i-propyl ether	361	R630	276	Tetrachlorosilane	381
Propylethylene	345	R631	197	Tetraethoxysilane	386
Propylethylether	222	R 702	250	Tetraethyl lead	260
n-Propylformate	374	R717	20	Tetraethyl orthosilicate	386
Propylglycol	360	R732	335	Tetraethylplumbane	260
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Thiophane	393	Trimethylchloromethane	75	m-Xylene	441
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BCl3	38	C2H7N	197	C4H4O	228	C4H11N	140	C5H12O3	417
BF3	39	C2H7N	155	C4H5F5	339	C4H11N	164	C5H12O3Si	440
Br2	40	C2H7NO	190	C4H6	82	C4H11NO	156	C5H13N	26
CCl2O	346	C2H8N2	167	C4H6	42	C4H11NO	19	C5H13N	171
CHN	253	C2H8N2	207	C4H6	41	C4H12O3Si	319	C5H13N	172
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CH2O2	227	C3H4	378	C4H6O	438	C5H4O2	229	C6H4Cl2	125
CH3Br	278	C3H4Cl2	134	C4H6O2	274	C5H5N	379	C6H5Cl	92
CH3Cl	285	C3H4O	355	C4H6O2	431	C5H6O2	230	C6H5F	225
CH3F	294	C3H4O	9	C4H6O2	263	C5H7N	312	C6H6	36
CH3I	299	C3H4O2	10	C4H7Cl	94	C5H8	259	C6H7F3O2	194
CH4	264	C3H5Br	15	C4H7Cl	275	C5H8	338	C6H7N	310
CH4O	265	C3H5Cl	16	C4H7ClO	93	C5H8O	284	C6H7N	311
CH4S	300	C3H5Cl	99	C4H7N	85	C5H8O	111	C6H7N	32
CH5N	276	C3H5ClO	186	C4H8	53	C5H8O2	6	C6H10	107
CH6N2	298	C3H5ClO2	202	C4H8	103	C5H8O2	12	C6H10O	108
CH6Si	314	C3H5Cl3	409	C4H8	52	C5H8O2	301	C6H10O	262
CO	87	C3H6	113	C4H8	51	C5H8O2	356	C6H10O	106
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C2HCl3	408	C3H6Cl2	132	C4H8O	84	C5H9NO	313	C6H10O2	219
C2H2	8	C3H6Cl2O	133	C4H8O	223	C5H10	345	C6H10O2	17
C2H2Cl2	128	C3H6O	3	C4H8O	390	C5H10	110	C6H10O3	359
C2H2Cl2	129	C3H6O	357	C4H8O	292	C5H10O	147	C6H12	203
C2H2F4	387	C3H6O	373	C4H8O	187	C5H10O	309	C6H12	247
C2H3Cl	433	C3H6O	13	C4H8O	83	C5H10O	308	C6H12	246
C2H3ClF2	95	C3H6O	437	C4H8O2	306	C5H10O	318	C6H12	104
C2H3ClO	91	C3H6O2	273	C4H8O2	174	C5H10O	392	C6H12	288
C2H3ClO	7	C3H6O2	211	C4H8O2	195	C5H10O2	280	C6H12O	283
C2H3ClO2	286	C3H6O2	358	C4H8O2	374	C5H10O2	78	C6H12O	105
C2H3Cl2F	130	C3H6O2	175	C4H8O3	289	C5H10O2	221	C6H12O	244
C2H3Cl3	407	C3H6O3	427	C4H8S	393	C5H10O2	343	C6H12O	245
C2H3F	436	C3H6O3	160	C4H9Cl	75	C5H10O2	364	C6H12O2	61
C2H3F3	413	C3H7Cl	369	C4H9Cl	74	C5H10O2	77	C6H12O2	60
C2H3N	4	C3H7Cl	368	C4H9Cl	73	C5H10O2	363	C6H12O2	59
C2H4	206	C3H7N	14	C4H9NO	320	C5H10O3	142	C6H12O2	119
C2H4Cl2	126	C3H7NO	165	C4H9NO	154	C5H10O3	217	C6H12O2	30
C2H4Cl2	127	C3H7NO2	326	C4H10	44	C5H11Cl	28	C6H12O2	62
C2H4F2	149	C3H7NO3	377	C4H10	45	C5H11Cl	27	C6H12O3	192
C2H4O	1	C3H8	352	C4H10O	48	C5H11N	351	C6H12O3	337
C2H4O	210	C3H8O	353	C4H10O	49	C5H11N	112	C6H12O3	272
C2H4O2	295	C3H8O	290	C4H10O	146	C5H11NO	302	C6H13N	109
C2H4O2	2	C3H8O	354	C4H10O	307	C5H12	169	C6H14	159
C2H5Br	199	C3H8O2	269	C4H10O	47	C5H12	279	C6H14	304
C2H5Cl	201	C3H8O2	152	C4H10O	46	C5H12	342	C6H14	242
C2H5ClO	98	C3H8S	376	C4H10O2	270	C5H12O	282	C6H14	158
C2H5ClO	97	C3H8S	375	C4H10O2	151	C5H12O	281	C6H14	303
C2H5N	209	C3H8S	293	C4H10O2	191	C5H12O	344	C6H14O	200
C2H5NO2	323	C3H9B	421	C4H10O3	415	C5H12O	25	C6H14O	305
C2H6	188	C3H9N	366	C4H10S	79	C5H12O	24	C6H14O	243
C2H6O	189	C3H9N	365	C4H10S	148	C5H12O	23	C6H14O	179
C2H6O	163	C3H9N	418	C4H10S	80	C5H12O	222	C6H14O	31
C2H6O2	208	C3H10N2	372	C4H11As	71	C5H12O2	361	C6H14O	180
C2H6S	218	C3H10OSi	426	C4H11N	68	C5H12O2	193	C6H14O2	362
C2H6S	173	C3H10O3Si	416	C4H11N	69	C5H12O2	360	C6H14O2	138
C2H6S2	162	C3H10Si	425	C4H11N	66	C5H12O2	153	C6H14O2	56

Sum formula	No.	Sum formula	No.	Sum formula	No.	Sum formula	No.	Sum formula	No.
C6H14O3	144	C7H16	296	C8H18O	123	C10H12	391	F2	224
C6H15N	177	C7H16	235	C8H18O2	124	C10H14	141	F4Ge	233
C6H15N	176	C7H16	168	C8H18O3	143	C10H14	395	F4Si	382
C6H15N	412	C7H16	297	C8H18O3	178	C10H16	261	F6W	429
C6H15N	248	C7H16O	236	C8H19N	215	C10H16	350	HBr	251
C6H15NO	145	C7H16O	29	C8H19N	122	C10H18	114	HCl	252
C6H16N2	398	C7H16O2	58	C8H19NSi2	397	C10H18O	385	HClO3S	100
C6H18OSi2	241	C7H16O3	411	C8H20O4Si	386	C10H20	76	HCl3Si	410
C6H18O3Si3	239	C7H16O3	271	C8H20Pb	260	C10H20	117	HF	254
C6H19NSi2	240	C7H22O2Si3	234	C8H22N2Si	70	C10H22	116	HI	255
C7H5F3O	414	C8H8	383	C8H24N4Ti	394	C10H22O	120	HNO3	322
C7H7Cl	101	C8H8O	5	C8H24O2Si3	332	C10H30O5Si5	115	H2	250
C7H7N	439	C8H10	198	C8H24O4Si4	331	C11H20O2	214	H2Cl2Si	135
C7H8	329	C8H10	442	C9H10	317	C11H24	430	H2O2	256
C7H8	405	C8H10	441	C9H10	315	C12H22	136	H2S	258
C7H8O	33	C8H10	443	C9H10	316	C12H26	341	H2Se	257
C7H10O	389	C8H12	435	C9H12	216	C12H26	185	H3As	35
C7H10O2	18	C8H14	434	C9H12	102	C12H27N	406	H3N	20
C7H12O2	63	C8H14	330	C9H12	420	C12H36O6Si6	184	H3P	347
C7H12O2	64	C8H14O2	81	C9H12	419	ClF3	90	H4Ge	231
C7H12O2	267	C8H16	424	C9H12	367	ClO2	89	H4N2	249
C7H12O2	65	C8H16	204	C9H18	370	Cl2	88	H4Si	380
C7H14	238	C8H16	334	C9H18O	328	Cl2OS	402	H6B2	121
C7H14	287	C8H16O	212	C9H20	422	Cl3OP	348	H6Si2	181
C7H14	205	C8H16O2	213	C9H20	291	Cl3P	349	NO	325
C7H14O	277	C8H16O2	72	C9H20	327	Cl4Ge	232	NO2	324
C7H14O	237	C8H16O3	57	C9H20	400	Cl4Si	381	O2	335
C7H14O2	22	C8H17N	161	C9H21N	428	Cl4Sn	403	O2S	384
C7H14O2	55	C8H18	423	C10H8	321	Cl4Ti	404	O3	336
C7H14O2	21	C8H18	166	C10H10	182	Cl5Sb	34		
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Product overview

TRANSMITTERS WITH ELECTROCHEMICAL SENSORS FOR THE DETECTION OF TOXIC GASES AND OXYGEN

Dräger Polytron 7000
Intrinsically safe universal transmitter for continuous monitoring of toxic gases and oxygen by means of an electrochemical sensor.



ST-3812-2003

Dräger Polytron 7000 with pump
Universal transmitter for continuous monitoring of toxic gases and oxygen with an integrated pump module.



ST-318-2003

Dräger Polytron 7000 with relay
Universal transmitter for continuous monitoring of toxic gases and oxygen with an integrated relay module.



ST-3814-2003

Dräger Polytron 3000 with display
Intrinsically safe low-cost transmitter for continuous monitoring of toxic gases and oxygen.



ST-3811-2003

Dräger Polytron 3000 without display
Intrinsically safe low-cost transmitter for continuous monitoring of toxic gases and oxygen.



ST-3811-2003

Dräger Polytron 8100
Explosion-proof transmitter with electrochemical DrägerSensor for toxic gases and vapours with analogue and digital signal output, display and optional relays.



D-52604-2012

Dräger Polytron 5100
Explosion-proof 2 wire 4-20-mA-transmitter for toxic gases and vapours with display, optional relays and electrochemical DrägerSensor.



D-12415-2014

Dräger Polytron 2000
Transmitter with pre-calibrated DrägerSensor MEC for continuous monitoring of toxic gases and oxygen for non-explosion proof areas.



D-86378-2013

TRANSMITTERS WITH IR-SENSORS FOR THE DETECTION OF FLAMMABLE GASES AND VAPOURS

Dräger PIR 7000

Explosion-proof infrared optical transmitter for the detection of flammable gases and vapours offering virtually drift-free optics and SS 316L stainless steel enclosure.



ST-11659-2007

Dräger PIR 3000

Explosion-proof infrared optical transmitter for the detection of flammable gases and vapours in standard applications.



ST-7766-2005

Dräger Polytron 8700

Explosion-proof transmitter with Dräger PIR 7000 for flammable gases and vapours. With analogue and digital signal output, display and optional relays.



D-14893-2010

Dräger Polytron 5700

Explosion-proof transmitter for flammable gases and vapours with display, optional relays and Dräger PIR 7000.



D-32409-2011

Dräger Polytron 8310

Explosion-proof transmitter with DrägerSensor IR for flammable gases and vapours. With analogue and digital signal output, display and optional relays.



D-15018-2010

Dräger Polytron 5310

Explosion-proof transmitter for flammable gases and vapours with display, optional relays and DrägerSensor IR.



D-32406-2011

GS01

Intrinsically safe true wireless transmitter for the detection of flammable gases and vapours.



D-42775-2015

TRANSMITTERS WITH IR-SENSORS FOR THE DETECTION OF TOXIC GASES

Dräger PIR 7200

Explosion-proof infrared optical transmitter for monitoring of carbon dioxide, suitable for industrial environments.



ST-11660-2007

Dräger Polytron 8720

Explosion-proof transmitter with Dräger PIR 7200 for carbon dioxide. With analogue and digital signal output, display and optional relays.



D-46491-2012

Dräger Polytron 5720

Explosion-proof transmitter for carbon dioxide with display, optional relays and Dräger PIR 7200.



D-39564-2011

Product overview

TRANSMITTERS AND SENSING HEADS WITH CATALYTIC BEAD SENSORS

Dräger PEX 3000

Family of low-cost 4-20-mA-transmitters with DrägerSensor Ex PR M DQ or LC M, with internal display and control elements.



D-11160-2011

Dräger Polytron SE Ex PR M1 DQ

Sensing head with DrägerSensor Ex PR M DQ and measuring range 0 to 100 %LEL.



D-13899-2010

Dräger Polytron SE Ex LC M1 DD

Sensing head with DrägerSensor Ex LC M for flammable gases with concentrations lower than 10 %LEL.



D-13896-2010

Dräger Polytron SE Ex HT M DQ

Sensing head with DrägerSensor Ex HT M DQ and metal enclosure for ambient temperatures up to 150 °C.



D-13899-2010

Dräger Polytron 8200

Explosion-proof transmitter with DrägerSensor Ex PR NPT DQ or Ex LC NPT for flammable gases and vapours. With analogue and digital signal output, display and optional relays.



D-15042-2010

Dräger Polytron 5200

Low-cost explosion-proof transmitter for flammable gases with display, optional relays and DrägerSensor Ex PR NPT DQ or Ex LC NPT.



D-32407-2011

ELECTROCHEMICAL, INFRARED-OPTICAL AND CATALYTIC BEAD SENSORS

DrägerSensor (elch)

Electrochemical gas sensor for toxic gases and oxygen, with integrated data memory.



ST-3829-2003

DrägerSensor AC

Electrochemical gas sensor for the leak-detection of corrosive gases.



ST-3806-2003

DrägerSensor IR

Infrared optical sensor with semi-bridge interface and mV-signal for the detection of flammable gases.



ST-7767-2005

DrägerSensor Ex PR M DQ

Catalytic bead sensor (pellistor sensor) for the detection of flammable gas concentrations by way of catalytic reaction ranging up to 100 %LEL.



D-1120-2010

DrägerSensor Ex LC M

Catalytic bead sensor with integrated electronics for the detection of flammable gas concentrations ranging up to 10 %LEL.



ST-7770-2005

TRANSMITTERS WITH OPEN PATH FOR THE DETECTION OF SELECTED GASES AND VAPOURS

Dräger Polytron Pulsar
 Open path system for the detection of gas clouds along a line-of-sight of 4 to 200 meters between receiver and transmitter. Robust due to the stainless steel housing.



ST-981-2001

Dräger Polytron Pulsar 2
 Open path system for the detection of gas clouds along a line-of-sight of 4 to 200 meters between receiver and transmitter.



D-86923-2013

Dräger Polytron Pulsar Duct Mount
 Cross duct system for the detection of gas clouds in a duct with a diameter of 1 to 8 meters.



ST-3156-2003

Dräger Pulsar 7000 Series
 Open path system for the detection of gas clouds along a line-of-sight of 4 to 200 meters between receiver and transmitter. Robust due to the stainless steel housing.



D-7359-2016

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
1	Acetaldehyde CAS 75-07-0 CH ₃ CHO	Aald C ₂ H ₄ O	Ethyl aldehyde Ethanal Acetic aldehyde	44.1 1.52 r 141 v	0.78 1 ppm = 1.84 mg/m ³	21 70 °F	1006	<-20 <-4 °F	4.0 (74)	4.0 (74)	4.0 (74)	4.0 (74)	4.0 (74)	155 IIA T4
2	Acetic acid CAS 64-19-7 CH ₃ COOH	C ₂ H ₄ O ₂	Ethanoic acid Methanecarboxylic acid Ethylic acid	60.1 2.07 r	1.05 1 ppm = 2.50 mg/m ³	118 244 °F	16	39 102 °F	6.0 (150)	4.0 (100)	4.0 (100)	4.0 (100)	4.0 (100)	485 IIA T1
3	Acetone CAS 67-64-1 CH ₃ COCH ₃	DMK C ₃ H ₆ O	Dimethyl ketone Propan-2-one 2-Propanone Ketopropane	58.1 2.01 r 115 v	0.79 1 ppm = 2.42 mg/m ³	56 133 °F	246	<-20 <-4 °F	2.5 (61)	2.5 (61)	2.5 (61)	2.5 (61)	2.5 (61)	535 IIA T1
4	Acetonitrile CAS 75-05-8 CH ₃ CN	AN C ₂ H ₃ N	Methyl cyanide Ethyl nitrile Cyanomethane Methanecarbonitrile	41.1 1.42 r 99 v	0.78 1 ppm = 1.71 mg/m ³	82 180 °F	94	2 36 °F	3.0 (51)	3.0 (51)	3.0 (51)	3.0 (51)	3.0 (51)	525 IIA T1
5	Acetophenone CAS 98-86-2 C ₆ H ₅ COCH ₃	C ₈ H ₈ O	Acetyl benzene Methylphenylketone 1-Phenylethanone Phenylmethylketone	120.2 4.15 r	1.03 1 ppm = 5.01 mg/m ³	202 396 °F	0.4	77 171 °F	1.1 (55)			1.1 (55)		535 IIA T1
6	Acetyl acetone CAS 123-54-6 CH ₃ COCH ₂ COCH ₃	C ₆ H ₈ O ₂	2,4-Pentandione Pentane-2,4-dione Diacylmethane Aetyl-2-propanone	100.1 3.46 r	0.98 1 ppm = 4.17 mg/m ³	140 284 °F	9	34 93 °F	1.7 (71)	1.7 (71)			1.7 (71)	340 IIA T2
7	Acetylchloride CAS 75-36-5 CH ₃ COCl	C ₂ H ₃ ClO	Acetic acid chloride Ethanoyl chloride	78.5 2.71 r 325 v	1.10 1 ppm = 3.27 mg/m ³	51 124 °F	309	-4 25 °F	7.3 (239)	5.0 (164)		5.0 (164)	5.0 (164)	390 IIA T2
8	Acetylene CAS 74-86-2 C ₂ H ₂	C ₂ H ₂	Ethine Ethyne	26.0 0.90 r	Gas 1 ppm = 1.08 mg/m ³	-84 -119 °F	Gas	Gas	2.3 (25)	2.3 (25)	2.5 (27)	2.5 (27)	2.3 (25)	305 IIC T2
9	Acrolein CAS 107-02-8 CH ₂ =CHCHO	C ₃ H ₄ O	Acrylic aldehyde 2-Propenal Allyl aldehyde	56.1 1.94 r 117 v	0.84 1 ppm = 2.34 mg/m ³	52 126 °F	295	<-20 <-4 °F	2.8 (65)	2.8 (65)	2.8 (65)	2.8 (65)	2.85 (67)	215 IIB T3
10	Acrylic acid CAS 79-10-7 CH ₂ =CHCOOH	C ₃ H ₄ O ₂	Propenoic acid Acroleic acid Ethylencarboxylic acid	72.1 2.49 r	1.05 1 ppm = 3.00 mg/m ³	141 286 °F	4.3	55 131 °F	2.4 (72)	2.4 (72)	2.4 (72)	2.4 (72)	2.9 (87)	395 IIB T2
11	Acrylonitrile CAS 107-13-1 CH ₂ =CHCN	ACN C ₃ H ₃ N	Vinyl cyanide Ethylene cyanide 2-Propenenitrile Cyanoethylene	53.1 1.83 r 116 v	0.80 1 ppm = 2.21 mg/m ³	77 171 °F	117	-5 23 °F	2.8 (62)	2.8 (62)	3.0 (66)	3.0 (66)	2.8 (62)	480 IIB T1
12	Allyl acetate CAS 591-87-7 CH ₃ COOCH ₂ CH=CH ₂	C ₆ H ₈ O ₂	Acetic acid allyl ester Propenyl acetate 2-Propenyl methanoate	100.1 3.46 r 114 v	0.93 1 ppm = 4.17 mg/m ³	103 217 °F	27	11 52 °F	1.7 (71)	1.7 (71)			1.7 (71)	375 IIA T2
13	Allyl alcohol CAS 107-18-6 CH ₂ =CHCH ₂ OH	AA C ₃ H ₆ O	2-Propen-1-ol Vinyl carbinol Propenyl alcohol 3-Hydroxypropene	58.1 2.01 r 107 v	0.85 1 ppm = 2.42 mg/m ³	97 207 °F	24	21 70 °F	2.5 (61)	2.5 (61)	2.5 (61)	2.5 (61)	2.5 (61)	375 IIB T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
1	50 (92)	200 (368)	CT IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	10 // 100 %LEL 40 / 100 %LEL // 16000 ppm Gas-Library 50 + 100 %LEL Gas-Library 20 / 100 %LEL // 8000 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL Aald: 50 / 100 / 200 ppm / LDL = 10 ppm	S = 0.3
2	10 (25)	10 (25)	CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and P 8100 AC	10 // 100 %LEL Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	P 8200 perf. approved with sensor ... DD
3	500 (1210)	1000 (2421)	CT IR IR IR IR IR OP	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron Pulsar 2	10 // 100 %LEL 30 / 100 %LEL // 7500 ppm Gas-Library 50 + 100 %LEL Gas-Library 35 / 100 %LEL // 8750 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL 1 // 4 / 8 LELm	performance approved with sensor ... DD performance approved performance approved performance approved performance approved performance approved CSF = 0.58 (Propane = 1.00) / LEL = 2.5
4	20 (34)	40 (69)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
5			IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334	60 / 100 %LEL (&) 100 %LEL (&)	
6	30 (125)		CT IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 100 %LEL (\$) 100 %LEL (\$) 100 %LEL (?) 100 %LEL (?)	
7			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
8		2500c (2708)	CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and P 8100 OV1	10 // 100 %LEL C2H2: 20 / 50 / 100 ppm / LDL = 5 ppm	performance approved with sensor ... DD S = 1.1
9	0.09 (0.21)	0.1 (0.23)	CT IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 Polytron 7000 and P 8100 OV1	10 // 100 %LEL 70 / 100 %LEL (&) 100 %LEL (&) 75 / 100 %LEL (&) 100 %LEL (&) as MeOH (20 / 50 / 200 ppm)	polymerizing/sensor poison S = 1.3 (L)
10	10 (30)	2 (6.0)	CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and P 8100 OV1	10 // 100 %LEL as EO x 10 (20 / 50 / 200 ppm x 10)	polymerizing/sensor poison S = 0.1 (L)
11	1.2T (2.7)	2 (4.4)	CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and P 8100 OV2	10 // 100 %LEL ACN: 20 / 50 / 100 ppm / LDL = 5 ppm	polymerizing/sensor poison S = 0.2
12			CT IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 Polytron 7000 and P 8100 OV1	10 // 100 %LEL 100 %LEL (?) 100 %LEL (?) as EO (20 / 50 / 200 ppm)	S = 1.0 (L)
13	2 (4.8)	2 (4.8)	CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	10 // 100 %LEL 30 / 100 %LEL 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL as EO (20 / 50 / 200 ppm)	S = 1.0 (L)

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14	Allylamine CAS 107-11-9 CH ₂ =CHCH ₂ NH ₂	C ₃ H ₇ N	3-Aminoprop-1-ene 2-Propene-1-amine 1-Amino propylene 2-Propenylamine	57.1 1.97 r 103 v	0.76 127 °F 1 ppm = 2.38 mg/m ³	53	262	<-20 <-4 °F	2.2 (52)			2.2 (52)		370 T2
15	Allyl bromide CAS 106-95-6 CH ₂ =CHCH ₂ Br	C ₃ H ₅ Br	3-Bromopropene Bromoallylene Propylene bromide	121.0 4.18 r 232 v	1.40 168 °F 1 ppm = 5.04 mg/m ³	70	150	-1 30 °F	4.3 (217)			4.4 (222)		295 IIA T3
16	Allyl chloride CAS 107-05-1 CH ₂ =CHCH ₂ Cl	C ₃ H ₅ Cl	3-Chloro-1-propene 3-Chloropropylene Propylenechloride Chloroallylene	76.5 2.64 r 162 v	0.94 113 °F 1 ppm = 3.19 mg/m ³	45	398	<-20 <-4 °F	3.2 (102)	2.9 (92)	2.9 (92)	2.9 (92)	2.9 (92)	390 IIA T2
17	Allylglycidylether CAS 106-92-3 CH ₂ =CHCH ₂ OC ₃ H ₅ O	AGE C ₆ H ₁₀ O ₂	Allyl-2,3-epoxypropylether 1,2-Epoxy-3-allyloxypropane 1-Allyloxy-2,3-epoxypropane Glycidyl allyl ether	114.1 3.94 r	0.97 309 °F 1 ppm = 4.75 mg/m ³	154	2.6	45 113 °F	1.3** (62)					249 IIB T3
18	Allyl methacrylate CAS 96-05-9 CH ₂ =C(CH ₃)COOCH ₂ CH=CH ₂	AMA C ₇ H ₁₀ O ₂	Allyl-2-methyl acrylate Methacrylic acid allyl ester 2-Methyl-2-propenyl-2-propenoate 2-Propenoic acid-2-methyl-2-propenyl ester 2-Methyl-2-propionic acid-2-propenyl ester	126.2 4.36 r	0.93 284 °F 1 ppm = 5.26 mg/m ³	140	8	33 91 °F	1.2 (63)					1 mg/m ³ = 0.19 ppm
19	2-Aminobutanol CAS 96-20-8 C ₂ H ₅ CH(NH ₂)CH ₂ OH	C ₄ H ₁₁ NO	2-Amino-1-butanol 2-Aminobutan-1-ol 1-Hydroxy-2-aminobutane 1-Hydroxy-2-butylamine	89.1 3.08 r	0.94 343 °F 1 ppm = 3.71 mg/m ³	173	0.2		1.6** (59)					1 mg/m ³ = 0.27 ppm
20	Ammonia CAS 7664-41-7 NH ₃	H ₃ N	Anhydrous ammonia R717	17.0 0.59 r	Gas -28 °F 1 ppm = 0.71 mg/m ³	-33.4	Gas	Gas	15.4 (109)	15.0 (106)	15.0 (106)	15.0 (106)	15.0 (106)	630 IIA T1
21	i-Amyl acetate CAS 123-92-2 CH ₃ COOC ₆ H ₁₁	C ₇ H ₁₄ O ₂	Isoamyl acetate Acetic acid i-amylester i-Pentyl acetate Isopentyl acetate 3-Methyl butyl acetate	130.2 4.49 r 93 v	0.87 288 °F 1 ppm = 5.43 mg/m ³	142	5.3	25 77 °F	1.0 (54)		1.0 (54)	1.0 (54)		380 IIA T2
22	n-Amyl acetate CAS 628-63-7 CH ₃ COOC ₅ H ₁₁	C ₇ H ₁₄ O ₂	n-Pentyl acetate Acetic acid n-amyl ester Acetic acid pentyl ester Amyl acetic ester	130.2 4.49 r	0.88 300 °F 1 ppm = 5.43 mg/m ³	149	5.3	41 106 °F	1.0 (54)	1.0 (54)	1.1 (60)	1.1 (60)	1.0 (54)	350 IIA T2
23	i-Amyl alcohol CAS 123-51-3 (CH ₃) ₂ CH(CH ₂) ₂ OH	C ₆ H ₁₂ O	3-Methylbutan-1-ol i-Pentanol i-Butyl carbinol Isoamyl alcohol Isopentanol Isobutyl carbinol Isopentyl alcohol	88.2 3.04 r	0.81 268 °F 1 ppm = 3.68 mg/m ³	131	2.7	42 108 °F	1.2 (44)	1.3 (48)	1.2 (44)	1.2 (44)	1.3 (48)	340 IIA T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
14			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison S = 0.45 (L) S = 0.7 (L)
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	Polytron 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 NH3 LC	as NH3 x 2 (50 / 100 ppm x 2)	
			EC	Polytron 7000 and P 8100 OV1	as C3H6 (30 / 50 / 100 ppm)	
15			EC	Polytron 7000 and P 8100 OV1	as Aald (50 / 100 / 200 ppm)	S = 0.3 (L)
16		1 (3.2)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison performance approved performance approved performance approved performance approved S = 0.15 (L)
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 9600 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	45 / 100 %LEL // 12800 ppm Gas-Library	
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	
17		5 (24)	EC	Polytron 7000 and P 8100 OV1	as Aald (50 / 100 / 200 ppm)	S = 0.4 (L)
18			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
19			IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
20	20 (14)	50 (35)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD S = 1.0 S = 1.0 S = 1.0 / Polytron 8100 only
			EC	Polytron 7000 and P 8100 NH3 HC	300 / 1000 / 1000 ppm / LDL = 30 ppm	
			EC	Polytron 7000 and P 8100 NH3 LC	NH3: 50 / 100 / 300 ppm / LDL = 5 ppm	
			EC	Polytron 7000 and P 8100 NH3 TL	NH3: 50 / 100 / 300 ppm / LDL = 1 ppm	
			EC	Polytron 8100 NH3 FL	NH3: 50 / 100 / 300 ppm / LDL = 1 ppm	
			EC	Polytron 5100 NH3 HC	300 + 500 + 1000 ppm	
			EC	Polytron 5100 NH3 LC	50 + 100 + 200 + 300 ppm	
			EC	Polytron 5100 NH3 TL	50 + 100 + 200 + 300 ppm	
			EC	Polytron 3000 NH3 HC	300 or 1000 ppm	
			EC	Polytron 3000 NH3 LC	100 ppm	
			EC	Polytron 2000 NH3	200 ppm	
21	50 (271)	100 (543)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
22	50 (271)	100 (543)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
23	20 (74)	100 (368)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	S = 0.6
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2400 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 600 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as EtOH (100 / 200 / 300 ppm)	

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24	n-Amyl alcohol CAS 71-41-0 C ₅ H ₁₁ OH	C ₅ H ₁₂ O	n-Pentanol 1-Pentanol Pentan-1-ol n-Pentyl alcohol n-Butyl carbinol	88.2 3.04 r	0.81	138 280 °F	1.3	43 109 °F	1.3 (48)	1.06 (39)		1.2 (44)	1.06 (39)	320 IIA T2
25	tert-Amyl alcohol CAS 75-85-4 (CH ₃) ₂ C(OH)C ₂ H ₅	C ₅ H ₁₂ O	2-Methylbutan-2-ol Dimethyl ethyl carbinol tert-Pentanol	88.2 3.04 r 88 v	0.81	102 216 °F	16	19 66 °F	1.3 (48)	1.4 (51)		1.2 (44)	1.4 (51)	435 IIA T2
26	n-Amylamine CAS 110-58-7 C ₅ H ₁₁ NH ₂	C ₅ H ₁₃ N	1-Aminopentane Monoamylamine 1-Pentane amine	87.2 3.01 r 93 v	0.76	104 219 °F	31	7 45 °F	1.3 (47)			2.2 (80)		IIA
27	i-Amylchloride CAS 107-84-6 (CH ₃) ₂ CHC ₂ H ₄ Cl	C ₅ H ₁₁ Cl	i-Pentylchloride 1-Chloro-3-methylbutane Isoamylchloride Isopentylchloride	106.6 3.68 r 112 v	0.89	100 212 °F		1 34 °F	1.5 (67)			1.5 (67)		240 IIA T3
28	n-Amylchloride CAS 543-59-9 C ₅ H ₁₁ Cl	C ₅ H ₁₁ Cl	Amyl chloride 1-Chloropentane Pentylchloride	106.6 3.68 r 106 v	0.88	108 226 °F	32	3 37 °F	1.4 (62)			1.6 (71)		255 IIA T3
29	tert-Amyl ethyl ether CAS 919-94-8 C ₂ H ₅ OC(CH ₃) ₂ C ₂ H ₅	TAAE C ₇ H ₁₆ O	Ethyl tert-amyl ether 2-Ethoxy-2-methyl butane 2-Methyl-2-ethoxy butane tert-Pentyl ethyl ether Ethyl tert-pentyl ether 1.1-Dimethylpropyl ethyl ether Ethyl-1.1-dimethylpropyl ether	116.2 4.01 r 95 v	0.76	102 216 °F			1.0** (48)				1 mg/m ³ = 0.21 ppm	
30	i-Amyl formate CAS 110-45-2 HCOOC ₅ H ₁₁	C ₆ H ₁₂ O ₂	Formic acid i-pentylester i-Pentyl formate 3-Methyl-1-butylformate Isoamyl formate Isopentyl formate	116.2 4.01 r 140 v	0.88	124 255 °F	15	22 72 °F	1.7 (82)				1 mg/m ³ = 0.21 ppm	320 IIA T2
31	tert-Amyl methyl ether CAS 994-05-8 CH ₃ OC(CH ₃) ₂ CH ₂ CH ₃	TAME C ₆ H ₁₄ O	Methyl-tert-amylether 2-Methoxy-2-methyl butane 2-Methyl-2-methoxybutane Methyl-tert-pentylether tert-Pentyl methyl ether 1.1-Dimethyl propylmethyl ether	102.2 3.53 r 99 v	0.77	86 187 °F	76	-18 0 °F	1.2 (51)	1.18 (50)			1.5 (64)	345 IIA T2
32	Aniline CAS 62-53-3 C ₆ H ₅ NH ₂	C ₆ H ₇ N	Aminobenzene Benzenamine Phenylamine	93.1 3.21 r	1.02	184 363 °F	0.7	76 169 °F	1.2 (47)	1.2 (47)	1.3 (50)	1.3 (50)	1.2 (47)	630 IIA T1
33	Anisole CAS 100-66-3 C ₆ H ₅ OCH ₃	MOB C ₇ H ₈ O	Methoxybenzene Phenyl methyl ether Methyl phenyl ether Phenoxy methane	108.1 3.73 r	0.99	154 309 °F	3.6	41 106 °F	1.2 (54)				1 mg/m ³ = 0.22 ppm	475 IIB T1
34	Antimony pentachloride CAS 7647-18-9 SbCl ₅	Cl ₅ Sb	Antimony-(V)-chloride	299.0 10.32 r	2.33	150 302 °F	1	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
35	Arsenic hydride CAS 7784-42-1 AsH ₃	H ₃ As	Hydrogen arsenide Arsine Arsenic trihydride	77.9 2.69 r	Gas	-62 -80 °F	Gas	Gas	3.9 (127)		5.1 (166)			285 T3
36	Benzene CAS 71-43-2 C ₆ H ₆	C ₆ H ₆	Benzol Phenyl hydride Cyclohexatriene	78.1 2.70 r 66 v	0.88	80 176 °F	100	-11 12 °F	1.2 (39)	1.2 (39)	1.2 (39)	1.2 (39)	1.2 (39)	555 IIA T1
37	Boron tribromide CAS 10294-33-4 BBr ₃	BBR ₃	Tribromoborane Boron bromide	250.5 8.65 r	2.69	90 194 °F	72	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
														1 mg/m ³ = 0.10 ppm

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
24	20 (74)		CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	100 %LEL 25 / 100 %LEL 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL as Aald (50 / 100 / 200 ppm)	S = 0.3 (L)
25	20 (74)	100 (368)	IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL (\$) 100 %LEL (\$) 100 %LEL (?) 100 %LEL (?)	
26			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	corrosive/sensor poison
27			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	corrosive/sensor poison
28			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	corrosive/sensor poison
29			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	20 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
30			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
31			CT IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL	
32	2 (7.8)	5 (19)	IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334	35 / 100 %LEL 50 + 100 %LEL	
33			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	40 / 100 %LEL 50 + 100 %LEL 35 / 100 %LEL 50 + 100 %LEL 100 %LEL	
34			EC EC	Polytron 7000 and P 8100 AC Polytron 7000 and P 8100 HCl	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm AnPC: 5 / 10 / 20 ppm / LDL = 0.2 ppm	S = 5.0
35	0.005 (0.016)	0.05 (0.16)	EC EC EC	Polytron 7000 and P 8100 Hydrides Polytron 7000 and P 8100 Hydrides SC Polytron 7000 and P 8100 PH3/Ash3	Ash3: 0.3 / 1 / 20 ppm / LDL = 0.03 ppm Ash3: 0.3 / 1 / 1 ppm / LDL = 0.01 ppm Ash3: 0.3 / 1 / 20 ppm / LDL = 0.02 ppm	S = 0.85 S = 0.65 S = 0.5
36	0.6T (2.0)	1 (3.3)	CT IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 3000, P 5310, P 8310	10 // 100 %LEL 30 / 100 %LEL // 3600 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL	performance approved with sensor ... DD performance approved performance approved
37		1c (10)	EC EC	Polytron 7000 and P 8100 AC Polytron 7000 and P 8100 HCl	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm as BCl3 (5 / 10 / 20 ppm)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
38	Boron trichloride CAS 10294-34-5 BCl ₃	BCl ₃	Trichloroborane Boron chloride	117.2 4.05 r	Gas	12.6 55 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
							1 ppm = 4.88 mg/m ³				1 mg/m ³ = 0.20 ppm			
39	Boron trifluoride CAS 7637-07-2 BF ₃	BF ₃	Trifluoroborane Boron fluoride	67.8 2.34 r	Gas	-100 -148 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
							1 ppm = 2.83 mg/m ³				1 mg/m ³ = 0.35 ppm			
40	Bromine CAS 7726-95-6 Br ₂	Br ₂		159.8 5.52 r	3.12	58.8 138 °F	220	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
							1 ppm = 6.66 mg/m ³				1 mg/m ³ = 0.15 ppm			
41	1,2-Butadiene CAS 590-19-2 H ₂ C=C=CHCH ₃	C ₄ H ₆	Methylallene	54.1 1.87 r	Gas	10.8 51 °F	Gas	Gas	1.6 (36)					340 T2
							1 ppm = 2.25 mg/m ³				1 mg/m ³ = 0.44 ppm			
42	1,3-Butadiene CAS 106-99-0 CH ₂ =CH-CH=CH ₂	C ₄ H ₆	Erythrene Vinylethylene Divinyl Biethylene	54.1 1.87 r	Gas	-5 23 °F	Gas	Gas	1.4 (32)	1.4 (32)	2.0 (45)	2.0 (45)	1.4 (32)	415 IIB T2
							1 ppm = 2.25 mg/m ³				1 mg/m ³ = 0.44 ppm			
43	1,3-Butadiene monoxide CAS 930-22-3 H ₂ C=CH-CHCH ₂ O	C ₄ H ₆ O	3,4-Epoxybut-1-ene Ethenyl oxirane Vinylethylene oxide	70.1 2.42 r	0.87	66 151 °F		<-20 <-4 °F	0.95* (28)					430 T2
							1 ppm = 2.92 mg/m ³				1 mg/m ³ = 0.34 ppm			
44	i-Butane CAS 75-28-5 (CH ₃) ₃ CH	C ₄ H ₁₀	Isobutane 2-Methylpropane Trimethylmethane 1,1-Dimethylethane R600a	58.1 2.01 r	Gas	-12 10 °F	Gas	Gas	1.5 (36)	1.3 (31)	1.6 (39)	1.8 (44)	1.3 (31)	460 IIA T1
							1 ppm = 2.42 mg/m ³				1 mg/m ³ = 0.41 ppm			
45	n-Butane CAS 106-97-8 C ₄ H ₁₀	C ₄ H ₁₀	Methylethylmethane R600	58.1 2.01 r	Gas	-0.5 31 °F	Gas	Gas	1.4 (34)	1.4 (34)	1.6 (39)	1.9 (46)	1.4 (34)	365 IIA T2
							1 ppm = 2.42 mg/m ³				1 mg/m ³ = 0.41 ppm			
46	2-Butanol CAS 78-92-2 C ₂ H ₅ CH(OH)CH ₃	SBA C ₄ H ₁₀ O	sec-Butyl alcohol Butan-2-ol Methyl ethyl carbinol 2-Hydroxybutane 1-Methyl propanol	74.1 2.56 r 97 v	0.81	99 210 °F	17	23 73 °F	1.7 (52)	1.7 (52)	1.7 (52)	1.7 (52)		390 IIB T2
							1 ppm = 3.09 mg/m ³				1 mg/m ³ = 0.32 ppm			
47	i-Butanol CAS 78-83-1 (CH ₃) ₂ CHCH ₂ OH	IBA C ₄ H ₁₀ O	Isobutanol Isobutyl alcohol i-Butyl alcohol 2-Methyl-1-propanol i-Propyl carbinol Isopropyl carbinol	74.1 2.56 r 81 v	0.80	108 226 °F	12	27 81 °F	1.4 (43)	1.4 (43)	1.7 (52)	1.7 (52)	1.7 (52)	430 IIA T2
							1 ppm = 3.09 mg/m ³				1 mg/m ³ = 0.32 ppm			
48	n-Butanol CAS 71-36-3 C ₄ H ₉ OH	NBA C ₄ H ₁₀ O	1-Butanol Butan-1-ol n-Butyl alcohol Propyl carbinol 1-Hydroxybutane	74.1 2.56 r	0.81	118 244 °F	7	35 95 °F	1.4 (43)	1.4 (43)	1.4 (43)	1.4 (43)	1.7 (52)	325 IIB T2
							1 ppm = 3.09 mg/m ³				1 mg/m ³ = 0.32 ppm			

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
38			EC	Polytron 7000 and P 8100 AC	BCI3: 3 / 10 / 10 ppm / LDL = 0.5 ppm	S = 3.0
			EC	Polytron 7000 and P 8100 HCl	BCI3: 5 / 10 / 20 ppm / LDL = 0.2 ppm	
			EC	Polytron 3000 BCI3	10 ppm	
			EC	Polytron 3000 AC	3 or 10 ppm	
39	0.35 (0.99)	1c (2.8)	EC	Polytron 7000 and P 8100 AC	BF3: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
40	0.1 (0.67)	0.1 (0.67)	EC	Polytron 7000 and P 8100 Cl2	Br2: 1 / 10 / 100 ppm / LDL = 0.05 ppm	S = 1.0
41			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
42	2T (4.5)	1 (2.3)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 4900 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	S = 1.2
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	BTD: 20 / 50 / 200 ppm / LDL = 5 ppm	
43			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	Polytron 5700 type 334	100 %LEL (\$)	
44	1000 (2421)	800 (1937)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved performance approved performance approved performance approved performance approved performance approved CSF = 1.07 (Propane = 1.00) / LEL = 1.5
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2600 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1040 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	
45	1000 (2421)	800 (1937)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD performance approved performance approved performance approved performance approved performance approved CSF = 0.95 (Propane = 1.00) / LEL = 1.4
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2800 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 700 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	
46		150 (463)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
47	100 (309)	100 (309)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3500 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1120 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
48	100 (309)	100 (309)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	S = 0.65
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3500 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 700 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as EtOH (100 / 200 / 300 ppm)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
49	tert-Butanol CAS 75-65-0 (CH ₃) ₃ COH	TBA C ₄ H ₁₀ O	tert-Butyl alcohol 2-Methyl-2-propanol Trimethyl carbinol 1,1-Dimethylethanol 2-Methylpropan-2-ol	74.1 2.56 r 82 v	0.79 1 ppm = 3.09 mg/m ³	83 181 °F	41	11 52 °F	1.4 (43)		2.4 (74) 1 mg/m ³ = 0.32 ppm	2.4 (74)		470 IIA T1
50	2-Butenal CAS 123-73-9 CH ₃ CH=CHCHO	C ₄ H ₆ O	Crotonaldehyde Crotonic aldehyde Propylene aldehyde	70.1 2.42 r 108 v	0.85 1 ppm = 2.92 mg/m ³	102 216 °F	24	8 46 °F	2.1 (61)			2.1 (61)	2.1 (61)	230 IIB T3
51	1-Butene CAS 106-98-9 C ₂ H ₅ CH=CH ₂	C4= C ₄ H ₈	1-Butylene But-1-ene Ethylethylene	56.1 1.94 r	Gas 1 ppm = 2.34 mg/m ³	-6 21 °F	Gas	Gas	1.5 (35)	1.6 (37)		1.6 (37)	1.6 (37)	360 IIA T2
52	2-Butene CAS 107-01-7 CH ₃ CH=CHCH ₃	C4= C ₄ H ₈	2-Butylene 1,2-Dimethylethylene	56.1 1.94 r	Gas 1 ppm = 2.34 mg/m ³	1 34 °F	Gas	Gas		1.6 (37)			1.6 (37)	325 IIB T2
53	i-Butene CAS 115-11-7 (CH ₃) ₂ C=CH ₂	iC4= C ₄ H ₈	Isobutene i-Butylene Isobutylene 2-Methylpropene 2-Methylprop-1-ene 1,1-Dimethylethylene	56.1 1.94 r	Gas 1 ppm = 2.34 mg/m ³	-7 19 °F	Gas	Gas	1.6 (37)	1.6 (37)		1.8 (42)	1.6 (37)	465 IIA T1
54	3-Butene-1-ol CAS 627-27-0 CH ₂ =CH(CH ₂) ₂ OH	C ₄ H ₈ O	Allylcarbinol 2-Vinylethan-1-ol Vinyl ethyl alcohol	72.1 2.49 r	0.84 1 ppm = 3.00 mg/m ³	112 234 °F		32 90 °F	2.0 (60)			4.7 (141)		IIB
55	1-tert-Butoxy-2,3-epoxypropane CAS 7665-72-7 CH ₂ OCHCH ₂ OC(CH ₃) ₃	TBGE C ₇ H ₁₄ O ₂	tert-Butyl glycidyl ether Glycidyl-tert-butyl ether tert-Butoxymethyloxirane 1,1-Dimethylethyl glycidyl ether	130.2 4.49 r	0.91 1 ppm = 5.43 mg/m ³	151 304 °F	2.5	41 106 °F	1.1** (60)					1 mg/m ³ = 0.18 ppm
56	2-Butoxyethanol CAS 111-76-2 C ₄ H ₉ OC ₂ H ₄ OH	EGBE C ₆ H ₁₄ O ₂	Ethylene glycol monobutyl ether Monobutyl glycol ether n-Butyl glycol Butyl cellosolve 1-Butoxy-2-hydroxy ethane Butyl oxitol	118.2 4.08 r	0.90 1 ppm = 4.93 mg/m ³	171 340 °F	1.2	61 142 °F	1.1 (54)	1.1 (54)	1.1 (54)	1.1 (54)		240 IIB T3
57	2-Butoxyethyl acetate CAS 112-07-2 CH ₃ COOC ₂ H ₄ OC ₄ H ₉	EGBEA C ₈ H ₁₆ O ₃	2-Butoxyethanol acetate Ethylene glycol monobutyl ether acetate Butyl glycol acetate Glycol monobutyl ether acetate Acetic acid-2-butoxyethyl ester Butyl cellosolve acetate 1-Acetoxy-2-butoxyethane	160.2 5.53 r	0.94 1 ppm = 6.68 mg/m ³	192 378 °F	0.31	74 165 °F	1.0 (67)	0.9 (60)	0.88 (59)	0.88 (59)		355 IIB T2
58	1-Butoxy-2-propanol CAS 5131-66-8 C ₄ H ₉ O-CH ₂ CH(OH)CH ₃	2PG1BE C ₇ H ₁₆ O ₂	Propylenglycol-1-butylether 1-Butoxypropan-2-ol	132.2 4.56 r	0.88 1 ppm = 5.51 mg/m ³	170 338 °F	1.3	59 138 °F	0.9 (50)					260 IIB T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
49	20 (62)	100 (309)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 25 / 100 %LEL // 3500 ppm Gas-Library 50 + 100 %LEL Gas-Library 15 / 100 %LEL // 2100 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	
50		2 (5.8)	CT IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 Polytron 7000 and P 8100 OV1	100 %LEL 100 %LEL (\$) 100 %LEL (\$) 100 %LEL (?) 100 %LEL (?) as C3H6 x 0.5 (30 / 50 / 100 ppm x 0.5)	S = 1.4 (L)
51			CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 25 / 100 %LEL // 3200 ppm Gas-Library 50 + 100 %LEL Gas-Library 20 / 100 %LEL // 2400 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	performance approved performance approved performance approved performance approved
52			CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	100 %LEL 25 / 100 %LEL 50 + 100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
53			CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	100 %LEL 20 / 100 %LEL // 3200 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 15 / 100 %LEL // 2400 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	
54			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
55			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	20 / 100 %LEL 20 + 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
56	10 (49)	50 (246)	IR IR IR IR IR EC	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	20 / 100 %LEL // 2200 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 5 / 100 %LEL // 550 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL as EtOH (100 / 200 / 300 ppm)	S = 0.65
57	20 (134)	20 (134)	IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	50 / 100 %LEL 50 + 100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL	
58			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	20 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
59	2-Butyl acetate CAS 105-46-4 CH ₃ COOCH(CH ₃)C ₂ H ₅	C ₈ H ₁₂ O ₂	sec-Butyl acetate 1-Methylpropyl acetate Acetic acid sec butyl ester	116.2 4.01 r 108 v	0.87 234 °F 1 ppm = 4.84 mg/m ³	112 25	25	16 61 °F	1.3 (63)	1.3 (63)	1.7 (82)	1.7 (82)		410 IIA T2
60	i-Butyl acetate CAS 110-19-0 CH ₃ COOCH ₂ CH(CH ₃) ₂	C ₈ H ₁₂ O ₂	Isobutyl acetate 2-Methylpropyl acetate Acetic acid i-butylester Acetic acid-2-methylpropyl ester i-Butyl ethanoate Isobutyl ethanoate	116.2 4.01 r 108 v	0.87 244 °F 1 ppm = 4.84 mg/m ³	118 20	20	18 64 °F	1.3 (63)		1.3 (63)	1.3 (63)		420 IIA T2
61	n-Butyl acetate CAS 123-86-4 CH ₃ COOC ₄ H ₉	BuAc C ₈ H ₁₂ O ₂	Acetic acid butylester n-Butyl ethanoate	116.2 4.01 r 99 v	0.88 261 °F 1 ppm = 4.84 mg/m ³	127 11	11	27 81 °F	1.2 (58)	1.2 (58)	1.7 (82)	1.3 (63)	1.3 (63)	390 IIA T2
62	tert-Butyl acetate CAS 540-88-5 CH ₃ COOC(CH ₃) ₃	C ₈ H ₁₂ O ₂	Acetic acid tert-butyl ester tert-Butyl ethanoate Acetic acid-1.1-dimethyl ethylester	116.2 4.01 r 110 v	0.86 207 °F 1 ppm = 4.84 mg/m ³	97 41	41	1 34 °F	1.3 (63)	1.3 (63)	1.5 (73)	1.7 (82)		435 IIA T2
63	i-Butyl acrylate CAS 106-63-8 CH ₂ =CHCOOC ₄ H ₉	C ₇ H ₁₂ O ₂	Isobutyl acrylate Acrylo-i-butylic ester 2-Methyl propyl acrylate 2-Propenoic acid-2-methylpropyl ester Propenoic acid i-butylester	128.2 4.43 r	0.89 270 °F 1 ppm = 5.34 mg/m ³	132 8.8	8.8		1.2* (64)		1 mg/m ³ = 0.19 ppm			
64	n-Butyl acrylate CAS 141-32-2 CH ₂ =CHCOOC ₄ H ₉	C ₇ H ₁₂ O ₂	Acrylobutylic ester Propenoic acid butyl ester Butyl-2-propenoate	128.2 4.43 r	0.90 298 °F 1 ppm = 5.34 mg/m ³	148 5.3	5.3	37 99 °F	1.2 (64)	1.2 (64)	1.5 (80)	1.5 (80)	1.2 (64)	275 IIB T3
65	tert-Butyl acrylate CAS 1663-39-4 CH ₂ =CHCOOC(CH ₃) ₃	TBA C ₇ H ₁₂ O ₂	Propenoic acid-1.1-dimethylethyl ester tert-Butylpropenoate Acrylic acid tert-butylester Acrylo-tert-butylic ester	128.2 4.43 r 109 v	0.88 243 °F 1 ppm = 5.34 mg/m ³	117 16	16	17 63 °F	1.2 (64)		1 mg/m ³ = 0.19 ppm			
66	i-Butyl amine CAS 78-81-9 (CH ₃) ₂ CHCH ₂ NH ₂	C ₄ H ₁₁ N	Isobutyl amine 2-Methylpropyl amine 2-Methyl-1-propane amine 1-Amino-2-methylpropane	73.1 2.52 r 114 v	0.76 151 °F 1 ppm = 3.05 mg/m ³	66 149	149	-13 9 °F	1.9 (58)	1.47 (45)		3.4 (104)	1.47 (45)	370 IIA T2
67	n-Butylamine CAS 109-73-9 C ₄ H ₉ NH ₂	C ₄ H ₁₁ N	1-Aminobutane 1-Butane amine Monobutylamine	73.1 2.52 r 105 v	0.74 172 °F 1 ppm = 3.05 mg/m ³	78 95	95	-14 7 °F	1.7 (52)	1.7 (52)	1.7 (52)	1.7 (52)	1.7 (52)	310 IIA T2
68	sec-Butylamine CAS 13952-84-6 C ₂ H ₅ CH(CH ₃)NH ₂	B2A C ₄ H ₁₁ N	2-Aminobutane 2-Butane amine 1-Methyl propylamine	73.1 2.52 r 108 v	0.72 145 °F 1 ppm = 3.05 mg/m ³	63 181	181	-20 -4 °F	1.7 (52)		1 mg/m ³ = 0.33 ppm			IIA

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
59	62 (300)	200 (968)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
60	62 (300)	150 (726)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
61	62 (300)	150 (726)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 3250 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 1950 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
62	42 (203)	200 (968)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
63			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
64	2 (11)	10 (53)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	polymerizing/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2400 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1200 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
65			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
66	2 (6.1)		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
67	2 (6.1)	5c (15)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
68	2 (6.1)		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
69	tert-Butylamine CAS 75-64-9 (CH ₃) ₃ CNH ₂	C ₄ H ₁₁ N	2-Amino-2-methylpropane 2-Methyl-2-propane amine 1,1-Dimethylethylamine	73.1 2.52 r 111 v	0.70	45 113 °F	394	<-30 <-22 °F	1.7 (52)			1.7 (52)		380 IIA T2
70	Bis(tert-butylamino)silane CAS 186598-40-3 ((CH ₃) ₃ CNH) ₂ SiH ₂	BTBAS C ₈ H ₂₂ N ₂ Si	N,N'-Di-tert-butylsilane diamine	174.4 6.02 r	0.82	166 331 °F	1.5		0.5* (36)					
71	tert-Butyl arsine CAS 4262-43-5 (CH ₃) ₃ CAsH ₂	TBAAs C ₄ H ₁₁ As	2-Methyl-i-propyl arsine 1,1-Dimethylethyl arsine	134.1 4.63 r	1.08	68 154 °F	166							
72	i-Butyl-i-butyrate CAS 97-85-8 (CH ₃) ₂ CHCOOCH ₂ CH(CH ₃) ₂	C ₈ H ₁₆ O ₂	i-Butyric acid i-butylester 2-Methylpropyl-i-butyrate i-Butyl-2-methyl propanoate Isobutyl isobutyrate Isobutyric acid isobutyl ester Isobutyl-2-methyl propanoate	144.2 4.98 r	0.85	147 297 °F	4	37 99 °F		0.8 (48)		0.96 (58)	0.8 (48)	430 IIA T2
73	i-Butyl chloride CAS 513-36-0 (CH ₃) ₂ CHCH ₂ Cl	C ₄ H ₉ Cl	Isobutyl chloride 1-Chloro-2-methylpropane 2-Methylpropyl chloride	92.6 3.20 r 131 v	0.88	69 156 °F	158	-21 -6 °F	2.0 (77)	2.0 (77)		2.0 (77)	2.0 (77)	416 IIA T2
74	n-Butyl chloride CAS 109-69-3 C ₄ H ₉ Cl	NBC C ₄ H ₉ Cl	Butylchloride 1-Chlorobutane n-Propylcarbiny chloride	92.6 3.20 r 117 v	0.89	78 172 °F	112	-12 10 °F	1.8 (69)	1.8 (69)		1.8 (69)	1.8 (69)	245 IIA T3
75	tert-Butylchloride CAS 507-20-0 (CH ₃) ₃ CCl	C ₄ H ₉ Cl	2-Chloro-2-methylpropane Trimethylchloromethane	92.6 3.20 r	0.84	51 124 °F	317	-33 -27 °F	1.8* (69)					541 IIA T1
76	tert-Butylcyclohexane CAS 3178-22-1 C ₆ H ₁₁ C(CH ₃) ₃	C ₁₀ H ₂₀	2-Cyclohexyl-2-methyl propane (1,1-Dimethylethyl)cyclohexane	140.2 4.84 r	0.81	171 340 °F								
77	i-Butyl formate CAS 542-55-2 HCOOC ₄ H ₉	C ₆ H ₁₀ O ₂	Isobutyl formate Formic acid i-butylester 2-Methylpropyl formate	102.1 3.52 r 123 v	0.88	98 208 °F	43	5 41 °F	1.7 (72)			1.7 (72)		320 T2
78	n-Butyl formate CAS 592-84-7 HCOOC ₄ H ₉	C ₆ H ₁₀ O ₂	Formic acid butyl ester Butyl methanoate	102.1 3.52 r 111 v	0.92	106 223 °F	31	18 64 °F	1.6 (68)			1.7 (72)		265 T3
79	n-Butyl mercaptan CAS 109-79-5 C ₄ H ₉ SH	NBM C ₄ H ₁₀ S	1-Butanethiol Butane-1-thiol 1-Mercaptobutane Thiobutyl alcohol	90.2 3.11 r 94 v	0.84	98 208 °F	40	1 34 °F	1.4 (53)	1.4 (53)				272 T3
80	tert-Butyl mercaptan CAS 75-66-1 (CH ₃) ₃ CSH	tBM C ₄ H ₁₀ S	2-Methylpropane-2-thiol 1,1-Dimethyl ethanethiol 2-Methyl-2-propanethiol	90.2 3.11 r	0.83	64 147 °F	195	-26 -15 °F	1.3* (49)					
81	Butyl methacrylate CAS 97-88-1 CH ₂ =C(CH ₃)COOC ₄ H ₉	BMA C ₈ H ₁₄ O ₂	n-Butyl methacrylate 2-Methyl butylacrylate 2-Methyl-2-propenoic acid butylester Methacrylic acid butylester	142.2 4.91 r	0.90	163 325 °F	2.7	50 122 °F	1.0 (59)	1.0 (59)			1.0 (59)	290 IIA T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
69	2 (6.1)		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
70			EC	Polytron 7000 and P 8100 Hydrides	BTBS: 5 / 20 / 20 ppm / LDL = 0.4 ppm	S = 0.08
71			EC	Polytron 7000 and P 8100 Hydrides SC	as PH3 x 0.75 (0.3 / 1.0 ppm x 0.75)	S = 1.5 (L)
72			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
73			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
74	3 (12)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
75			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
76			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
77			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
78			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
79	0.5 (1.9)	10 (38)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	Polytron 5700 type 334	100 %LEL (\$)	
80			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	S = 0.5
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 H2S LC	tBM: 20 / 50 / 100 ppm / LDL = 1 ppm	
81			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
82	But-2-yne CAS 503-17-3 CH ₃ CCCH ₃	C ₄ H ₆	2-Butyne Dimethyl acetylene Crotonylene	54.1 1.87 r 68 v	0.69	27 81 °F	774	<-20 <-4 °F	1.4 (32)			1.4 (32)		
											1 mg/m ³ = 0.44 ppm			
83	i-Butyraldehyde CAS 78-84-2 (CH ₃) ₂ CHCHO	C ₄ H ₈ O	i-Butanal Isobutanal i-Butyric aldehyde Isobutyraldehyde 2-Methyl propanal Isobutyric aldehyde	72.1 2.49 r 91 v	0.79	64 147 °F	184	-24 -11 °F	1.6 (48)	1.6 (48)		1.6 (48)	1.6 (48)	165 IIA T4
											1 mg/m ³ = 0.33 ppm			
84	n-Butyraldehyde CAS 123-72-8 C ₃ H ₇ CHO	C ₄ H ₈ O	n-Butanal Butyl aldehyd Butyric acid aldehyde n-Butyric aldehyde	72.1 2.49 r 96 v	0.80	75 167 °F	113	-11 12 °F	1.7 (51)	1.7 (51)		1.9 (57)	1.8 (54)	190 IIA T4
											1 mg/m ³ = 0.33 ppm			
85	Butyronitrile CAS 109-74-0 C ₃ H ₇ CN	C ₄ H ₇ N	n-Butyronitrile Butanenitrile Butyric acid anitrile 1-Cyanopropane Propyl cyanide n-Propyl cyanide	69.1 2.39 r 87 v	0.79	117 243 °F	20	18 64 °F	1.6 (46)		1.65 (48)	1.65 (48)		500 T1
											1 mg/m ³ = 0.35 ppm			
86	Carbon dioxide CAS 124-38-9 CO ₂	CO ₂	Carbonic anhydride Carbonic acid anhydride R744	44.0 1.52 r	Gas	-78.5 -109 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.55 ppm			
87	Carbon monoxide CAS 630-08-0 CO	CO	Carbon oxide Carbonic oxide	28.0 0.97 r	Gas	-192 -314 °F	Gas	Gas	10.9 (127)	10.9 (127)	12.5 (146)	12.5 (146)	10.9 (127)	605 IIA T1
											1 mg/m ³ = 0.86 ppm			
88	Chlorine CAS 7782-50-5 Cl ₂	Cl ₂		70.9 2.45 r	Gas	-34 -29 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.34 ppm			
89	Chlorine dioxide CAS 10049-04-4 ClO ₂	ClO ₂	Chlorine peroxide	67.5 2.33 r	Gas	11 52 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.36 ppm			
90	Chlorine trifluoride CAS 7790-91-2 ClF ₃	ClF ₃	Chlorotrifluoride	92.4 3.19 r	Gas	12 54 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.26 ppm			
91	2-Chloroacetaldehyde CAS 107-20-0 CH ₂ ClCHO	C ₂ H ₃ ClO	2-Chloro-1-ethanal Monochloroacetaldehyde	78.5 2.71 r	1.21	86 187 °F	133		5.7 (186)					
											1 mg/m ³ = 0.31 ppm			
92	Chlorobenzene CAS 108-90-7 C ₆ H ₅ Cl	MCB C ₆ H ₅ Cl	Phenyl chloride Monochlorobenzene Benzene chloride Chlorobenzol	112.6 3.89 r 82 v	1.11	132 270 °F	12	28 82 °F	1.3 (61)	1.3 (61)	1.3 (61)	1.3 (61)	1.4 (66)	590 IIA T1
											1 mg/m ³ = 0.21 ppm			
93	3-Chloro-2-butanone CAS 4091-39-8 CH ₃ CHClCOCH ₃	C ₄ H ₇ ClO	1-Chloroethyl methyl ketone	106.6 3.68 r	1.06	115 239 °F	23		2.3* (102)					
											1 mg/m ³ = 0.23 ppm			
94	1-Chlorobut-2-ene CAS 591-97-9 CH ₃ CH=CHCH ₂ Cl	C ₄ H ₇ Cl	Crotyl chloride	90.6 3.13 r	0.93	85 185 °F	494	<0				4.2 (159)		
											1 mg/m ³ = 0.26 ppm			

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
82			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL (?) 100 %LEL (?) 100 %LEL (?)	
83			CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	10 // 100 %LEL 25 / 100 %LEL 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
84	20 (60)		CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	10 // 100 %LEL 30 / 100 %LEL // 5100 ppm Gas-Library 50 + 100 %LEL Gas-Library 15 / 100 %LEL // 2550 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL (?) as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
85		8 (23)	IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	30 / 100 %LEL 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL	
86	5000 (9167)	5000 (9167)	IR IR	PIR 7200 and Polytron 8720 Polytron 5720	2000 ppm / 10 vol% / 30 vol% 2000 + 5000 ppm + 1 + 2 + 5 + 10 + 20 + 30 vol%	performance approved performance approved
87	30 (35)	50 (58)	CT EC EC EC EC EC EC EC EC EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and P 8100 CO Polytron 7000 and P 8100 CO LH Polytron 7000 and P 8100 CO LS Polytron 5100 CO Polytron 5100 CO LS Polytron 5100 CO LH Polytron 3000 CO Polytron 3000 CO LS Polytron 2000 CO	10 // 100 %LEL CO: 50 / 300 / 1000 ppm / LDL = 5 ppm CO: 50 / 300 / 300 ppm / LDL = 15 ppm CO: 200 / 1000 / 5000 ppm / LDL = 10 ppm 50 + 100 + 200 + 300 + 500 + 1000 ppm 200 + 300 + 500 + 1000 + 2000 + 3000 ppm 50 + 100 + 200 + 300 ppm 100 or 300 or 1000 ppm 300 ppm 300 or 1000 ppm	+ 4000 + 5000 ppm
88	0.5 (1.5)	1c (3.0)	EC EC EC EC	Polytron 7000 and P 8100 Cl2 Polytron 5100 Cl2 Polytron 3000 Cl2 Polytron 2000 Cl2	Cl2: 1 / 10 / 100 ppm / LDL = 0.05 ppm 1 + 3 + 5 + 10 + 20 + 30 + 50 ppm 1 or 10 or 25 ppm 10 ppm	S = 1.0
89	0.1 (0.28)	0.1 (0.28)	EC	Polytron 7000 and P 8100 Cl2	ClO2: 1 / 10 / 100 ppm / LDL = 0.05 ppm	S = 0.45 (+/- 20%)
90		0.1c (0.39)	EC EC	Polytron 7000 and P 8100 AC Polytron 3000 AC	ClF3: 3 / 3 / 30 ppm / LDL = 0.5 ppm 3 or 10 ppm	allowed for cross calibration with Cl2 allowed for cross calibration with Cl2
91		1c (3.3)	EC	Polytron 7000 and P 8100 OV1	as C3H6 x 0.5 (30 / 50 / 100 ppm x 0.5)	S = 1.4 (L)
92	10 (47)	75 (352)	CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334	10 // 100 %LEL 50 / 100 %LEL // 6500 ppm Gas-Library 50 + 100 %LEL Gas-Library	corrosive/sensor poison performance approved performance approved
93			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	35 / 100 %LEL 50 + 100 %LEL 40 / 100 %LEL 50 + 100 %LEL	
94			CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and P 8100 OV1	100 %LEL as Aald x 2 (50 / 100 / 200 ppm x 2)	corrosive/sensor poison S = 0.15 (L)

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
95	1-Chloro-1,1-difluoroethane CAS 75-68-3 CH ₃ CClF ₂	C ₂ H ₃ ClF ₂	Difluoro chloroethane R142b HCFC 142b	100.5 3.47 r	Gas	-10 14 °F	Gas	Gas	6.3 (264)			6.2 (260)		IIA
											1 mg/m ³ = 0.24 ppm			
96	Chlorodimethylsilane CAS 1066-35-9 (CH ₃) ₂ Si(H)Cl	DMSC C ₂ H ₇ ClSi	Dimethylchlorosilane Dimethylsilyl chloride	94.6 3.27 r	0.85	35 95 °F	582	<-28 <-18 °F	3.0* (118)					IIC
											1 mg/m ³ = 0.25 ppm			
97	Chloroethanol CAS 107-07-3 Cl-CH ₂ CH ₂ -OH	C ₂ H ₅ ClO	2-Chloroethan-1-ol 2-Chloroethyl alcohol Ethylene chlorohydrin Glycol chlorohydrin	80.5 2.78 r	1.21	129 264 °F	7.1	55 131 °F	5.0 (168)	4.9 (164)	4.9 (164)	4.9 (164)	5.0 (168)	425 IIA T2
											1 mg/m ³ = 0.30 ppm			
98	Chloromethyl methylether CAS 107-30-2 ClCH ₂ OCH ₃	CMME C ₂ H ₅ ClO	Chlorodimethyl ether Chloromethoxymethane Methylchloromethyl ether Methoxy methylchloride Dimethylchloroether	80.5 2.78 r	1.06	59 138 °F	213	-8 18 °F					4.4 (148)	IIA
											1 mg/m ³ = 0.30 ppm			
99	2-Chloropropene CAS 557-98-2 CH ₂ =C(Cl)CH ₃	C ₃ H ₅ Cl	2-Chloropropylene i-Propenyl chloride Isopropenyl chloride	76.5 2.64 r 128 v	0.93	23 73 °F	915	<-20 <-4 °F	2.5 (80)			4.5 (143)		
											1 mg/m ³ = 0.31 ppm			
100	Chlorosulfonic acid CAS 7790-94-5 HSO ₃ Cl	HClO ₃ S	Chlorosulfuric acid Sulfuric chlorohydrin Sulfuryl oxychloride	116.5 4.02 r	1.75	151 304 °F	0.45	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.21 ppm			
101	2-Chlorotoluene CAS 95-49-8 CH ₃ C ₆ H ₄ Cl	C ₇ H ₇ Cl	1-Chloro-2-methylbenzene o-Chlorotoluene o-Tolyl chloride	126.6 4.37 r	1.08	159 318 °F	3.8	43 109 °F	1.3 (69)					550 IIA T1
											1 mg/m ³ = 0.19 ppm			
102	Cumene CAS 98-82-8 C ₆ H ₅ CH(CH ₃) ₂	C ₉ H ₁₂	Cumol i-Propyl benzene Isopropyl benzene 2-Phenyl propane	120.2 4.15 r 70 v	0.86	152 306 °F	5.3	31 88 °F	0.8 (40)	0.8 (40)	0.9 (45)	0.9 (45)	0.8 (40)	420 IIA T2
											1 mg/m ³ = 0.20 ppm			
103	Cyclobutane CAS 287-23-0 (CH ₂) ₄	C ₄ H ₈	Tetramethylene	56.1 1.94 r	Gas	12.5 55 °F	Gas	Gas	1.8 (42)	1.8 (42)		1.8 (42)	1.8 (42)	IIA
											1 mg/m ³ = 0.43 ppm			
104	Cyclohexane CAS 110-82-7 (CH ₂) ₆	C ₆ H ₁₂	Hexahydrobenzene Hexamethylene Hexanaphthene Naphthene	84.2 2.91 r 67 v	0.78	81 178 °F	104	-18 0 °F	1.0 (35)	1.0 (35)	1.3 (46)	1.3 (46)	1.2 (42)	260 IIA T3
											1 mg/m ³ = 0.29 ppm			
105	Cyclohexanol CAS 108-93-0 (CH ₂) ₅ CHOH	Anol C ₆ H ₁₂ O	Cyclohexyl alcohol Hexahydrophenol Hydroxycyclohexane Hexalin Hydralin	100.2 3.46 r	0.95	161 322 °F	1	61 142 °F	1.2 (50)	1.2 (50)			1.2 (50)	300 IIA T3
											1 mg/m ³ = 0.24 ppm			
106	Cyclohexanone CAS 108-94-1 (CH ₂) ₅ CO	Anon C ₆ H ₁₀ O	Sextone Hexanone Cyclohexyl ketone Ketoexamethylene Pimelic ketone	98.1 3.39 r	0.95	156 313 °F	4.5	43 109 °F	1.3 (53)	1.3 (53)	1.1 (45)	1.1 (45)	1.0 (41)	430 IIA T2
											1 mg/m ³ = 0.24 ppm			

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
95	1000 (4188)		IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL // 31000 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	100 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	100 %LEL (&)	
96			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
97	1 (3.4)	5 (17)	EC	Polytron 7000 and P 8100 OV1	as EO x 0.5 (20 / 50 / 100 ppm x 0.5)	S = 2.0 (L)
98			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
99			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	45 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	45 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
100			EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
101		50 (264)	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	55 / 100 %LEL	
			IR	Polytron 5700 type 340	100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
102	10 (50)	50 (250)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2000 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 1600 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
103			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
104	200 (702)	300 (1053)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 600 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.62 (Propane = 1.00) / LEL = 1.0
105		50 (209)	IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
106	20 (82)	50 (204)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 3500 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 1500 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

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No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
107	Cyclohexene CAS 110-83-8 C ₆ H ₁₀	C ₆ H ₁₀	1,2,3,4-Tetrahydrobenzene Hexanaphthylene Benzene tetrahydride	82.1 2.83 r 70 v	0.81 181 °F 1 ppm = 3.42 mg/m ³	83 181 °F	90	-17 1 °F	1.1 (38)	1.1 (38)		1.2 (41)	1.2 (41)	265 IIA T3
108	Cyclohexene oxide CAS 286-20-4 (CH ₂) ₄ CHCHO	CHO C ₆ H ₁₀ O	1,2-Epoxy cyclohexane Tetramethylene oxirane 7-Oxabicyclo(4.1.0)heptane	98.1 3.39 r 95 v	0.97 266 °F 1 ppm = 4.09 mg/m ³	130 266 °F	12	24 75 °F	1.5 (61)					345 IIB T2
109	Cyclohexylamine CAS 108-91-8 (CH ₂) ₅ CHNH ₂	CHA C ₆ H ₁₃ N	Cyclohexane amine Aminocyclohexane Hexahydroaniline Aminohexahydrobenzene	99.2 3.42 r 79 v	0.86 273 °F 1 ppm = 4.13 mg/m ³	134 273 °F	13	27 81 °F	1.1 (45)	1.1 (45)	1.5 (62)	1.5 (62)	1.1 (45)	275 IIA T3
110	Cyclopentane CAS 287-92-3 (CH ₂) ₅	CP C ₅ H ₁₀	Pentamethylene	70.1 2.42 r 83 v	0.74 120 °F 1 ppm = 2.92 mg/m ³	49 120 °F	346	<-20 <-4 °F	1.4 (41)	1.4 (41)	1.1 (32)	1.5 (44)	1.4 (41)	320 IIA T2
111	Cyclopentanone CAS 120-92-3 (CH ₂) ₄ CO	C ₅ H ₈ O	Keto pentamethylene Ketocyclopentane Adipic ketone	84.1 2.90 r 88 v	0.95 268 °F 1 ppm = 3.50 mg/m ³	131 268 °F	11.5	26 79 °F	1.6* (56)					430 IIA T2
112	Cyclopentylamine CAS 1003-03-8 C ₅ H ₉ NH ₂	C ₅ H ₁₁ N	Aminocyclopentane Cyclopentane-1-amine	85.2 2.94 r 80 v	0.86 225 °F 1 ppm = 3.55 mg/m ³	107 225 °F	24.9		1.3* (46)					
113	Cyclopropane CAS 75-19-4 (CH ₂) ₃	C ₃ H ₆	Trimethylene RC 270	42.1 1.45 r	Gas -27 °F 1 ppm = 1.75 mg/m ³	-33 -27 °F	Gas	Gas	2.4 (42)	2.4 (42)		2.4 (42)	2.4 (42)	495 IIA T1
114	cis-Decahydronaphthalene CAS 493-01-6 CH(CH ₂) ₆ CH	C ₁₀ H ₁₈	cis-Bicyclo(4.4.0)decane cis-Decaline Perhydronaphthalene cis-Naphthane	138.3 4.77 r	0.90 385 °F 1 ppm = 5.76 mg/m ³	196 385 °F	1.1	61 142 °F	0.7 (40)	0.7 (40)			0.7 (40)	240 IIA T3
115	Decamethyl cyclopentasiloxane CAS 541-02-6 Si ₅ O ₅ (CH ₃) ₁₀	DMCPS C ₁₀ H ₃₀ O ₅ Si ₅	Cyclomethicone	370.8 12.80 r	0.96 410 °F 1 ppm = 15.45 mg/m ³	210 410 °F	0.16	77 171 °F	0.7* (108)					390 T2
116	n-Decane CAS 124-18-5 C ₁₀ H ₂₂	C ₁₀ H ₂₂		142.3 4.91 r	0.73 345 °F 1 ppm = 5.93 mg/m ³	174 345 °F	1.7	46 115 °F	0.7 (42)	0.7 (42)		0.8 (47)	0.7 (42)	200 IIA T4
117	1-Decene CAS 872-05-9 H ₂ C=CH(CH ₂) ₇ CH ₃	C ₁₀ H ₂₀	n-Decylene	140.3 4.84 r	0.74 342 °F 1 ppm = 5.85 mg/m ³	172 342 °F	2	<55 <131 °F		0.55 (32)		0.5 (29)		235 T3
118	Deuterium CAS 7782-39-0 D ₂	2D D ₂	Heavy Hydrogen Diplogen Dideuterium	4.0 0.14 r	Gas -250 -418 °F 1 ppm = 0.17 mg/m ³	-250 -418 °F	Gas	Gas	6.7 (11)			5.0 (8.3)		560 T1
119	Diacetone alcohol CAS 123-42-2 CH ₃ COCH ₂ COH(CH ₃) ₂	C ₆ H ₁₂ O ₂	4-Hydroxy-4-methyl-2-pentanone 2-Methyl-2-pentanol-4-one 4-Hydroxy-2-keto-4-methylpentane	116.2 4.01 r	0.93 331 °F 1 ppm = 4.84 mg/m ³	166 331 °F	1	58 136 °F	1.3 (63)	1.8 (87)	1.8 (87)	1.8 (87)	1.8 (87)	515 IIB T1

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
107		300 (1026)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
108			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
109	2 (8.3)	10 (41)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
110		600 (1753)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2100 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 700 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 0.65 (Propane = 1.00) / LEL = 1.4
111			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
112			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
113			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
114			IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
115			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
116			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 1750 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 350 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
117			IR	PIR 7000 type 334, P 8700 type 334	45 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 100 %LEL	
118			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
119	20 (97)	50 (242)	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

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No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
120	Di-i-amyl ether CAS 544-01-4 (CH ₃) ₂ CH(CH ₂) ₂) ₂ O	C ₁₀ H ₂₂ O	Diisoamyl ether Isoamyl ether Di-i-pentyl ether Diisopentyl ether Isopentyl ether 1,1'-Oxybis(3-methyl-butane) Di-3-methylbutyl ether	158.3 5.46 r	0.78 343 °F 1 ppm = 6.60 mg/m ³	173 343 °F	1.49	45 113 °F	0.6 (40)		1 mg/m ³ = 0.15 ppm			
121	Diborane CAS 19287-45-7 B ₂ H ₆	H ₆ B ₂	Boron hydride Boroethane Diboron hexahydride	27.7 0.96 r	Gas -93 -135 °F 1 ppm = 1.15 mg/m ³	Gas -93 -135 °F	Gas	Gas	0.8 (9.2)			0.8 (9.2)		
122	Dibutylamine CAS 111-92-2 (C ₄ H ₉) ₂ NH	DnBA C ₈ H ₁₉ N	Di-n-butylamine N-Butyl-1-butanamine	129.3 4.46 r	0.76 322 °F 1 ppm = 5.39 mg/m ³	161 322 °F	2.7	42 108 °F			1 mg/m ³ = 0.19 ppm	1.1 (59)		260 IIA T3
123	Di-n-butylether CAS 142-96-1 (C ₄ H ₉) ₂ O	C ₈ H ₁₈ O	1-Butoxybutane 1,1'-Oxybisbutane Dibutylether Butyl ether	130.2 4.49 r 95 v	0.77 286 °F 1 ppm = 5.43 mg/m ³	141 286 °F	6.4	25 77 °F	0.9 (49)	0.9 (49)		1.5 (81)	0.9 (49)	175 IIB T4
124	Di-tert-butyl peroxide CAS 110-05-4 (CH ₃) ₃ COOC(CH ₃) ₃	DTBP C ₈ H ₁₈ O ₂	Bis(1,1-dimethylethyl)peroxide	146.2 5.05 r 81 v	0.79 230 °F 1 ppm = 6.09 mg/m ³	110 230 °F	26	4 39 °F	0.7 (43)	0.74 (45)			1.0 (61)	170 IIB T4
125	1,2-Dichlorobenzene CAS 95-50-1 C ₆ H ₄ Cl ₂	ODCB C ₆ H ₄ Cl ₂	ortho-Dichlorobenzene o-Dichlorobenzol	147.0 5.07 r	1.32 354 °F 1 ppm = 6.13 mg/m ³	179 354 °F	1.33	66 151 °F	1.7 (104)		2.2 (135)	2.2 (135)	2.2 (135)	640 IIA T1
126	1,1-Dichloroethane CAS 75-34-3 CH ₃ CHCl ₂	C ₂ H ₄ Cl ₂	Ethylidene chloride R150a	99.0 3.42 r 296 v	1.17 135 °F 1 ppm = 4.13 mg/m ³	57 135 °F	243	-10 14 °F	5.6 (231)	5.6 (231)	5.4 (223)	5.4 (223)	5.6 (231)	440 IIA T2
127	1,2-Dichloroethane CAS 107-06-2 ClCH ₂ CH ₂ Cl	EDC C ₂ H ₄ Cl ₂	Ethylene chloride Ethylene dichloride Ethane dichloride R150	99.0 3.42 r 208 v	1.25 183 °F 1 ppm = 4.13 mg/m ³	84 183 °F	87	13 55 °F	4.2 (173)	6.2 (256)	6.2 (256)	6.2 (256)	6.2 (256)	440 IIA T2
128	1,1-Dichloroethylene CAS 75-35-4 CH ₂ =CCl ₂	VDC C ₂ H ₂ Cl ₂	1,1-Dichloroethene Vinylidene chloride R1130a	96.9 3.34 r 314 v	1.25 90 °F 1 ppm = 4.04 mg/m ³	32 90 °F	660	-25 -13 °F	6.5 (262)	6.5 (262)	6.5 (262)	6.5 (262)	5.6 (226)	530 IIA T1
129	1,2-Dichloroethylene trans CAS 156-60-5 CHCl=CHCl	C ₂ H ₂ Cl ₂	1,2-Dichloroethene trans Dioform trans R1130	96.9 3.34 r 293 v	1.26 118 °F 1 ppm = 4.04 mg/m ³	48 118 °F	361	-6 21 °F	6.1 (246)				5.6 (226)	440 IIA T2
130	1,1-Dichloro-1-fluoroethane CAS 1717-00-6 CCl ₂ FCH ₃	C ₂ H ₃ Cl ₂ F	R141b HCFC 141b	117.0 4.04 r	1.27 90 °F 1 ppm = 4.88 mg/m ³	32 90 °F	648		5.6* (273)					
131	Dichloromethane CAS 75-09-2 CH ₂ Cl ₂	DCM CH ₂ Cl ₂	Methylene chloride Methylene dichloride R30	84.9 2.93 r 518 v	1.33 104 °F 1 ppm = 3.54 mg/m ³	40 104 °F	470	n. a.	13.0 (460)		13.0 (460)	13.0 (460)		605 IIA T1
132	1,2-Dichloropropane CAS 78-87-5 CH ₃ CH(Cl)CH ₂ Cl	PDC C ₃ H ₆ Cl ₂	1,2-Propylene dichloride R270	113.0 3.90 r 188 v	1.16 205 °F 1 ppm = 4.71 mg/m ³	96 205 °F	51	15 59 °F	3.1 (146)	3.4 (160)	3.4 (160)	3.4 (160)	3.4 (160)	555 IIA T1

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
120			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
121		0.1 (0.12)	EC	Polytron 7000 and P 8100 Hydrides	B2H6: 0.5 / 1 / 1 ppm / LDL = 0.05 ppm	S = 0.4
			EC	Polytron 7000 and P 8100 Hydrides SC	B2H6: 0.3 / 1 / 5 ppm / LDL = 0.02 ppm	S = 0.45
			EC	Polytron 3000 B2H6	0.5 ppm	
122	5 (27)		IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
123			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	Polytron 5700 type 334	100 %LEL (\$)	
124			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
125	10 (61)	50c (306)	IR	PIR 7000 type 334, P 8700 type 334	100 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
126	100 (413)	100 (413)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	Polytron 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
127	1T (4.1)	50 (206)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL // 15500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL // 15500 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
128	2 (8.1)		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	corrosive/sensor poison
129		200 (808)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
130			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	85 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	100 %LEL (&)	
131	50 (177)	25 (88)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 39000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	50 / 100 %LEL // 65000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
132		75 (353)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 9300 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL // 9300 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
133	1,3-Dichloro-2-propanol CAS 96-23-1 (CH ₂ Cl) ₂ CHOH	1,3-DCP C ₃ H ₅ Cl ₂ O	1,3-Dichlorohydrin 1,3-Dichloro-i-propanol 1,3-Dichloroisopropyl alcohol 1,3-Dichloro-2-hydroxypropane	129.0 4.45 r	1.36	175 347 °F	0.72	74 165 °F	3.5* (188)		1 mg/m ³ = 0.19 ppm			IIA
134	1,3-Dichloropropene CAS 542-75-6 ClCH ₂ CH=CHCl	DCP C ₃ H ₄ Cl ₂	Telone 3-Chloroallyl chloride 1,3-Dichloropropylene	111.0 3.83 r 298 v	1.23	108 226 °F	37	27 81 °F	5.3 (245)		5.3 (245)	5.3 (245)		IIA
135	Dichlorosilane CAS 4109-96-0 SiH ₂ Cl ₂	DCS H ₂ Cl ₂ Si	Silicon dichloride	101.0 3.49 r	Gas	8 46 °F	Gas	Gas	2.5 (105)			4.1 (173)		185 T4
136	Dicyclohexyl CAS 92-51-3 (C ₆ H ₁₁) ₂		Bicyclohexyl Cyclohexyl cyclohexane	166.3 5.74 r	0.86	227 441 °F		74 165 °F	0.6 (42)			0.7 (49)		240 IIA T3
137	1,3-Dicyclopentadiene CAS 77-73-6 C ₁₀ H ₁₂		4,7-Methylenetetrahydro indene Cyclopentadiene dimere Tetrahydro-4,7-methanoindene	132.2 4.56 r	0.94	166 331 °F	3	39 102 °F		0.8 (44)	0.8 (44)	0.8 (44)	0.8 (44)	500 IIA T1
138	1,1-Diethoxyethane CAS 105-57-7 CH ₃ CH(OC ₂ H ₅) ₂		Acetal Diethylacetal Acetaldehyde diethyl acetal Ethylidene diethyl ether	118.2 4.08 r 144 v	0.82	102 216 °F	35	13 55 °F	1.6 (79)			1.6 (79)		230 T3
139	Diethoxy methyl silane CAS 2031-62-1 (C ₂ H ₅ O) ₂ SiHCH ₃	DEMS C ₆ H ₁₄ O ₂ Si	Methyl diethoxy silane Methylhydrogen diethoxy silane	134.3 4.64 r	0.84	94 201 °F			1.0* (56)					
140	Diethylamine CAS 109-89-7 (C ₂ H ₅) ₂ NH	DEA C ₄ H ₁₁ N	N-Ethylethane amine N,N-Diethylamine	73.1 2.52 r 111 v	0.70	56 133 °F	256	<-20 <-4 °F	1.7 (52)	1.7 (52)	1.8 (55)	1.8 (55)	1.7 (52)	310 IIA T2
141	1,2-Diethylbenzene CAS 135-01-3 C ₆ H ₄ (C ₂ H ₅) ₂		o-Diethylbenzene	134.2 4.63 r	0.88	183 361 °F	1.1	55 131 °F	0.8* (45)					380 IIA T2
142	Diethyl carbonate CAS 105-58-8 CO(OC ₂ H ₅) ₂	DEC C ₆ H ₁₀ O ₃	Diethoxy formic acid anhydride Carbonic acid diethyl ester	118.1 4.08 r 106 v	0.97	126 259 °F	11	25 77 °F	1.4 (69)	1.4 (69)			1.4 (69)	445 IIB T2
143	Diethylene glycol diethylether CAS 112-36-7 (C ₂ H ₅ OC ₂ H ₄) ₂ O	DEGDDE C ₈ H ₁₈ O ₃	Diethyldiglycol Bis(2-ethoxyethyl)-ether Diethylcarbitol Ethylidiglyme 1,1'-Oxybis(2-ethoxy-ethane) 3,6,9-Trioxa undecane	162.2 5.60 r	0.91	189 372 °F	0.8		0.9** (61)					
144	Diethyleneglycol dimethylether CAS 111-96-6 CH ₃ OC ₂ H ₄ OC ₂ H ₄ OCH ₃	DEGDME C ₆ H ₁₄ O ₃	Bis(2-methoxyethyl)-ether Dimethyl diglycol Diglyme Dimethyl carbitol 1,1'-Oxybis(2-methoxy-ethane)	134.2 4.63 r	0.94	160 320 °F	2.2	51 124 °F	1.3 (73)					190 T4
145	N,N-Diethylethanolamine CAS 100-37-8 (C ₂ H ₅) ₂ NC ₂ H ₄ OH		2-Diethylaminoethanol 2-Hydroxy triethylamine 2-Diethylaminoethyl alcohol	117.2 4.05 r	0.88	161 322 °F	1.9	51.5 125 °F	1.8 (88)		6.7 (327)	6.7 (327)		320 IIA T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
133			IR	PIR 7000 type 334, P 8700 type 334	55 / 100 %LEL	
			IR	Polytron 5700 type 334	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	50 + 100 %LEL (&)	
134	1 (4.6)		IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 15900 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL // 21200 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
135			EC	Polytron 7000 and P 8100 AC	DCS: 3 / 10 / 30 ppm / LDL = 0.5 ppm	Check sensor after prolonged exposure
			EC	Polytron 7000 and P 8100 HCl	DCS: 5 / 10 / 20 ppm / LDL = 0.2 ppm	S = 3.0
136			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
137	0.5 (2.8)	5 (28)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
138			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
139			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
140	2 (6.1)	25 (76)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	DEA: 100 ppm / LDL = 5 ppm	S = 0.5
			EC	Polytron 7000 and P 8100 NH3 TL	DEA: 100 ppm / LDL = 2 ppm	S = 0.65*
			EC	Polytron 8100 NH3 FL	DEA: 100 ppm / LDL = 2 ppm	S = 0.65* / Polytron 8100 only
141			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
142			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
143			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as MeOH (20 / 50 / 200 ppm)	S = 1.5 (L)
144	5 (28)		IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
145	5 (24)	10 (49)	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 NH3 LC	as NH3 x 2 (50 / 100 ppm x 2)	S = 0.5 (L)

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
146	Diethyl ether CAS 60-29-7 (C ₂ H ₅) ₂ O	C ₄ H ₁₀ O	Ethoxy ethane 1,1'-Oxybisethane Diethyl oxide Ethyl ether R610	74.1 2.56 r 111 v	0.71	35 95 °F	586 1 ppm = 3.09 mg/m ³	<-20 <-4 °F	1.7 (52)	1.7 (52)	1.9 (59)	1.9 (59)	1.7 (52)	175 IIB T4
147	Diethyl ketone CAS 96-22-0 (C ₂ H ₅) ₂ CO	DEK C ₆ H ₁₀ O	3-Pentanone Pentan-3-one Amylketone Dimethylacetone Methacetone Propione	86.1 2.97 r	0.81	102 216 °F	36 1 ppm = 3.59 mg/m ³	7 45 °F		1.6 (57)	1.6 (57)	1.6 (57)	1.6 (57)	455 IIB T1
148	Diethylsulfide CAS 352-93-2 (C ₂ H ₅) ₂ S	C ₄ H ₁₀ S	Diethyl thioether 1,1'-Thiobisethane 3-Thiapentane	90.2 3.11 r	0.84	92 198 °F	66 1 ppm = 3.76 mg/m ³	-10 14 °F	1.0* (38)					
149	1,1-Difluoroethane CAS 75-37-6 CHF ₂ CH ₃	C ₂ H ₄ F ₂	Ethylidene fluoride R152a	66.1 2.28 r	Gas	-25 -13 °F	Gas 1 ppm = 2.75 mg/m ³	Gas	4.0 (110)					455 IIA T1
150	Difluoromethane CAS 75-10-5 CH ₂ F ₂	CH ₂ F ₂	Methylene fluoride R32	52.0 1.79 r	Gas	-51.7 -61 °F	Gas 1 ppm = 2.17 mg/m ³	Gas	13.1 (284)					648 T1
151	1,2-Dimethoxyethane CAS 110-71-4 (CH ₃ OCH ₂) ₂	EGDME C ₄ H ₁₀ O ₂	Ethylene glycol dimethyl ether Dimethylglycol Monoglyme 2,5-Dioxahexane Glycol dimethylether	90.1 3.11 r 103 v	0.87	84 183 °F	78 1 ppm = 3.75 mg/m ³	-2 28 °F	1.6 (60)	1.6 (60)			1.6 (60)	197 IIB T4
152	Dimethoxymethane CAS 109-87-5 CH ₂ (OCH ₃) ₂	Formal C ₃ H ₈ O ₂	Methylal Formaldehyde dimethylacetal Methylene glycol dimethyl ether Formal	76.1 2.63 r 121 v	0.86	42 108 °F	426 1 ppm = 3.17 mg/m ³	-31 -24 °F	2.2 (70)	2.2 (70)	2.2 (70)	1.6 (51)	2.5 (79)	235 IIB T3
153	2,2-Dimethoxypropane CAS 77-76-9 (CH ₃) ₂ C(OCH ₃) ₂	C ₆ H ₁₂ O ₂	Acetone dimethylacetal Dimethyl dimethoxy methane	104.2 3.60 r	0.85	83 181 °F	66 1 ppm = 4.34 mg/m ³	-11 12 °F	6.0* (261)					
154	N,N-Dimethyl acetamide CAS 127-19-5 (CH ₃) ₂ NCOCH ₃	DMAC C ₄ H ₉ NO	Acetic acid dimethyl amide Acetyl dimethylamine N,N-Dimethyl methanamide	87.1 3.01 r	0.94	165 329 °F	0.5 1 ppm = 3.63 mg/m ³	66 151 °F	1.8 (65)		1.8 (65)			IIA
155	Dimethylamine CAS 124-40-3 (CH ₃) ₂ NH	DMA C ₂ H ₇ N	N-Methylmethanamine	45.1 1.56 r	Gas	7 45 °F	Gas 1 ppm = 1.88 mg/m ³	Gas	2.8 (53)	2.8 (53)	2.8 (53)	2.8 (53)	2.8 (53)	400 IIA T2
156	2-Dimethylaminoethanol CAS 108-01-0 (CH ₃) ₂ NC ₂ H ₄ OH	C ₄ H ₁₁ NO	N,N-Dimethylethanolamine N,N-Dimethyl-2-hydroxyethylamine	89.1 3.08 r	0.89	131 268 °F	5.6 1 ppm = 3.71 mg/m ³	31 88 °F				1.6 (59)		220 IIA T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
146	400 (1235)	400 (1235)	CT IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	10 // 100 %LEL 15 / 100 %LEL // 2550 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 5 / 100 %LEL // 850 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL Et2O: 50 / 50 / 200 ppm / LDL = 10 ppm	performance approved with sensor ... DD S = 0.5
147		200 (718)	CT IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 100 %LEL (\$) 100 %LEL (\$) 100 %LEL (?) 100 %LEL (?) 100 %LEL (?)	
148			EC	Polytron 7000 and P 8100 H2S LC	as THT (20 / 50 / 100 ppm)	S = 0.3
149			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	20 / 100 %LEL 20 + 50 + 100 %LEL 25 / 100 %LEL 50 + 100 %LEL 100 %LEL (?)	
150			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	5 / 100 %LEL // 6550 ppm Gas-Library 10 + 20 + 50 + 100 %LEL Gas-Library 5 / 100 %LEL // 6550 ppm Gas-Library 10 + 20 + 50 + 100 %LEL Gas-Library 100 %LEL (&)	
151			CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
152	300 (951)	1000 (3171)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL	
153			IR IR	PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL (?) 100 %LEL (?)	
154	10 (36)	10 (36)	IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	55 / 100 %LEL 100 %LEL 35 / 100 %LEL 50 + 100 %LEL 100 %LEL	
155	2 (3.8)	10 (19)	CT IR IR IR IR EC EC EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 NH3 LC Polytron 7000 and P 8100 NH3 TL Polytron 8100 NH3 FL	100 %LEL 30 / 100 %LEL 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL DMA: 100 ppm / LDL = 5 ppm DMA: 100 ppm / LDL = 2 ppm DMA: 100 ppm / LDL = 2 ppm	corrosive/sensor poison S = 0.5 S = 0.65* S = 0.65* / Polytron 8100 only
156			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	25 / 100 %LEL 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
157	Dimethylaminopropylamine CAS 109-55-7 (CH ₃) ₂ N(CH ₂) ₃ NH ₂	DMAPA C ₆ H ₁₄ N ₂	N,N-Dimethyl-1,3-diaminopropane 3-Aminopropyl dimethylamine N,N-Dimethyl-1,3-propandiamine 1-Amino-3-dimethylaminopropane	102.2 3.53 r	0.81 1 ppm = 4.26 mg/m ³	134 273 °F	6	35 95 °F	1.9 (81)	1.2 (51)			1.2 (51)	219 IIA T3
158	2,2-Dimethylbutane CAS 75-83-2 (CH ₃) ₃ CCH ₂ CH ₃	C ₆ H ₁₄	Neohexane	86.2 2.98 r 101 v	0.64 1 ppm = 3.59 mg/m ³	50 122 °F	348	<-20 <-4 °F	1.2 (43)	1.0 (36)		1.2 (43)		435 IIA T2
159	2,3-Dimethylbutane CAS 79-29-8 (CH ₃) ₂ CHCH(CH ₃) ₂	C ₆ H ₁₄	Di-i-propyl	86.2 2.98 r 98 v	0.66 1 ppm = 3.59 mg/m ³	58 136 °F	255	<-20 <-4 °F	1.2 (43)	1.0 (36)		1.2 (43)		415 IIA T2
160	Dimethyl carbonate CAS 616-38-6 CO(OCH ₃) ₂	DMC C ₃ H ₆ O ₃	Dimethoxy formic acid anhydride Carbonic acid dimethyl ester	90.1 3.11 r	1.07 1 ppm = 3.75 mg/m ³	90 194 °F	53	14 57 °F	4.2* (158)		1 mg/m ³ = 0.27 ppm			455 T1
161	N,N-Dimethyl cyclohexyl amine CAS 98-94-2 C ₆ H ₁₁ N(CH ₃) ₂	DMCHA C ₈ H ₁₇ N	N-Cyclohexyl dimethyl amine Hexahydro-N,N-dimethyl aniline Dimethylamino cyclohexane	127.2 4.39 r	0.85 1 ppm = 5.30 mg/m ³	161 322 °F	3.6	40 104 °F	0.9 (48)		1 mg/m ³ = 0.19 ppm			215 T3
162	Dimethyl disulfide CAS 624-92-0 (CH ₃) ₂ S ₂	DMDS C ₂ H ₆ S ₂	2,3-Dithiabutane	94.2 3.25 r	1.06 1 ppm = 3.93 mg/m ³	110 230 °F	28	10 50 °F	1.1* (43)		1 mg/m ³ = 0.25 ppm			370 IIA T2
163	Dimethylether CAS 115-10-6 (CH ₃) ₂ O	DME C ₂ H ₆ O	Methoxy methane Dimethyl oxide 1,1'-Oxybismethane Methyl ether	46.1 1.59 r	Gas 1 ppm = 1.92 mg/m ³	-25 -13 °F	Gas	Gas	2.7 (52)	2.7 (52)		3.4 (65)	2.7 (52)	240 IIB T3
164	Dimethylethylamine CAS 598-56-1 C ₂ H ₆ N(CH ₃) ₂	DMEA C ₄ H ₁₁ N	N-Ethyl dimethylamine N,N-Dimethylethanamine	73.1 2.52 r	0.68 1 ppm = 3.05 mg/m ³	36.5 98 °F	527	-36 -33 °F	0.9* (27)		1 mg/m ³ = 0.33 ppm			190 T4
165	Dimethylformamide CAS 68-12-2 HCON(CH ₃) ₂	DMF C ₃ H ₇ NO	Formic acid dimethylamide N,N-Dimethylformamide N,N-Dimethylmethanamide N-Formyldimethylamine	73.1 2.52 r	0.95 1 ppm = 3.05 mg/m ³	153 307 °F	3.8	58 136 °F	2.2 (67)	1.8 (55)	2.2 (67)	2.2 (67)	1.8 (55)	440 IIA T2
166	3,4-Dimethyl hexane CAS 583-48-2 (C ₂ H ₅ CHCH ₃) ₂	C ₈ H ₁₈	i-Octane Isooctane	114.2 3.94 r 79 v	0.72 1 ppm = 4.76 mg/m ³	118 244 °F	22	2 36 °F	0.8 (38)	0.8 (38)			0.8 (38)	305 IIA T2
167	1,1-Dimethylhydrazine CAS 57-14-7 (CH ₃) ₂ N-NH ₂	UDMH C ₂ H ₈ N ₂	N,N-Dimethylhydrazine Dimazine unsym-Dimethylhydrazine	60.1 2.07 r 96 v	0.78 1 ppm = 2.50 mg/m ³	63 145 °F	145	-18 0 °F	2.0 (50)	2.4 (60)	2.0 (50)	2.0 (50)	2.4 (60)	240 IIB T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
157			IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
158	500 (1796)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
159	500 (1796)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
160			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	10 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
161			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
162			IR	PIR 7000 type 334, P 8700 type 334	85 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			EC	Polytron 7000 and P 8100 H2S LC	DMDS: 20 / 50 / 100 ppm / LDL = 1 ppm	
163	1000 (1921)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 4050 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 1350 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
164			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	Polytron 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	DMEA: 100 ppm / LDL = 5 ppm	
165	5 (15)	10 (30)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 5400 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1800 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
166	500 (2379)		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
167		0.5 (1.3)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	Polytron 5700 type 334	100 %LEL (\$)	
			EC	Polytron 7000 and P 8100 Hydrazine	UDMH: 1 / 1 / 5 ppm / LDL = 0.02 ppm	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
168	2,3-Dimethylpentane CAS 565-59-3 C ₂ H ₅ CH(CH ₃)CH(CH ₃) ₂	C ₇ H ₁₆	i-Heptane Isoheptane	100.2 3.46 r 98 v	0.70	90 194 °F	72	-12 10 °F	1.1 (46)			1.1 (46)		330 IIA T2
169	2,2-Dimethyl propane CAS 463-82-1 C(CH ₃) ₄	C ₅ H ₁₂	Neopentane Tetramethyl methane tert-Butyl methane tert-Pentane	72.2 2.49 r	Gas	10 50 °F	Gas	Gas	1.3 (39)			1.4 (42)		450 IIA T2
170	N,N-Dimethyl-i-propanolamine CAS 108-16-7 (CH ₃) ₂ NCH ₂ CH(OH)CH ₃	C ₆ H ₁₃ NO	1-Dimethylaminopropan-2-ol	103.2 3.56 r	0.86	126 259 °F	18	35 95 °F	2.7* (116)					IIA
171	N,N-Dimethyl-i-propylamine CAS 996-35-0 (CH ₃) ₂ CHN(CH ₃) ₂	DMIPA C ₆ H ₁₃ N	1-Dimethyl aminopropane N,N-Dimethyl-1-propane amine	87.2 3.01 r 83 v	0.72	66 151 °F	170	<-20 <-4 °F	1.1 (40)					IIA
172	N,N-Dimethyl-n-propyl amine CAS 926-63-6 (CH ₃) ₂ NC ₃ H ₇	DMPA C ₆ H ₁₃ N	N,N-Dimethyl-1-propanamine Dimethylpropylamine	87.2 3.01 r 98 v	0.72	65 149 °F	173	<-20 <-4 °F	1.3 (47)					IIA
173	Dimethyl sulfide CAS 75-18-3 (CH ₃) ₂ S	DMS C ₂ H ₆ S	2-Thiapropane Thiobismethane Methyl thiomethane	62.1 2.14 r 100 v	0.85	37 99 °F	527	<-20 <-4 °F	2.2 (57)			2.2 (57)		215 IIA T3
174	1,4-Dioxane CAS 123-91-1 (CH ₂) ₄ O ₂	C ₆ H ₈ O ₂	Diethylene dioxide Diethylene ether 1,4-Dioxo cyclohexane p-Dioxane	88.1 3.04 r 75 v	1.03	101 214 °F	38	11 52 °F	1.4 (51)	1.4 (51)	2.0 (73)	2.0 (73)	1.9 (70)	375 IIB T2
175	1,3-Dioxolane CAS 646-06-0 (CH ₂) ₃ O ₂	C ₃ H ₆ O ₂	1,3-Dioxo cyclopentane Formaldehyde ethylene acetal Dihydro-1,3-dioxol	74.1 2.56 r 100 v	1.06	74 165 °F	114	-5 23 °F	2.3 (71)	2.3 (71)			2.3 (71)	245 IIB T3
176	Di-i-propylamine CAS 108-18-9 ((CH ₃) ₂ CH) ₂ NH	DIPA C ₆ H ₁₅ N	Diisopropylamine 1-Methylethyl-2-propanamine	101.2 3.49 r 105 v	0.72	82 180 °F	85	-7 19 °F	1.2 (51)	1.2 (51)	1.1 (46)	1.1 (46)	1.2 (51)	285 IIA T3
177	Dipropylamine CAS 142-84-7 (C ₃ H ₇) ₂ NH	C ₆ H ₁₅ N	Di-n-propylamine N-Propyl-1-propane amine	101.2 3.49 r 102 v	0.74	105 221 °F	38	7 45 °F	1.2 (51)	1.2 (51)			1.1 (46)	260 IIA T3
178	Dipropylene glycol dimethyl ether CAS 111109-77-4 CH ₃ O(CH ₂) ₃ O(CH ₂) ₃ OCH ₃	DPDME C ₈ H ₁₈ O ₃	Oxybis(methoxypropane) Dimethoxy dipropylene glycol Bis(methoxypropyl)ether	162.2 5.60 r	0.90	175 347 °F	0.74	65 149 °F	0.7 (47)					165 IIB T4

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
168	500 (2088)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
169	1000 (3008)	1000 (3008)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
170			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
171	1 (3.6)		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	as NH3 x 2 (50 / 100 ppm x 2)	S = 0.5 (L)
172			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
173			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 H2S LC	DMS: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.3
174	20 (73)	100 (367)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 3500 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1120 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
175	100 (309)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as EO x 0.5 (20 / 50 / 200 ppm x 0.5)	S = 2.0 (L)
176		5 (21)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
177			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
178			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
179	Di-i-propyl ether CAS 108-20-3 (CH ₃) ₂ CHOCH(CH ₃) ₂	C ₆ H ₁₄ O	Diisopropylether 2-Isopropoxy propane 2,2'-Oxybispropane Isopropyl ether Diisopropyl oxide	102.2 3.53 r 89 v	0.72	69 156 °F	175	<-20 <-4 °F	1.0 (43)	1.0 (43)	1.4 (60)	1.4 (60)	1.0 (43)	405 IIA T2
180	Di-n-propyl ether CAS 111-43-3 (C ₃ H ₇) ₂ O	C ₆ H ₁₄ O	Dipropyl ether 1-Propoxypropane 1,1'-Oxybispropane	102.2 3.53 r 102 v	0.75	90 194 °F	73	-18 0 °F	1.2 (51)	1.18 (50)		1.3 (55)		175 IIA T4
181	Disilane CAS 1590-87-0 Si ₂ H ₆	DS H ₆ Si ₂	Silicon hexahydride Silico ethane	62.2 2.15 r	Gas	-14 7 °F	Gas		1.0* (26)					
182	Divinyl benzene CAS 1321-74-0 C ₆ H ₄ (CH=CH ₂) ₂	DVB C ₁₀ H ₁₀	Diethenyl benzene Vinylstyrene	130.2 4.49 r	0.91	195 383 °F	0.9	64 147 °F			1.1 (60)	0.7 (38)		
183	Divinylether CAS 109-93-3 (CH ₂ =CH) ₂ O	DVE C ₄ H ₆ O	Divinyloxide Vinylether 1,1'-Oxybisethene Ethenyloxyethene	70.1 2.42 r 97 v	0.77	28 82 °F	737	<-20 <-4 °F	1.7 (50)			1.7 (50)		360 IIB T2
184	Dodecamethyl cyclohexasiloxane CAS 540-97-6 (OSi(CH ₃) ₂) ₆	D6 C ₁₂ H ₃₆ O ₆ Si ₆	Dyclomethicone 6 DC 246 Fluid	444.9 15.36 r	0.98	245 473 °F	0.03		0.43* (80)					
185	n-Dodecane CAS 112-40-3 C ₁₂ H ₂₆	C ₁₂ H ₂₆	Dihexyl	170.3 5.88 r	0.75	216 421 °F	0.12	80 176 °F	0.6 (43)			0.6 (43)		200 IIA T4
186	Epichlorohydrin CAS 106-89-8 CH ₂ ClCHCH ₂ O	ECH C ₃ H ₅ ClO	1-Chloro-2,3-epoxypropane 2,3-Epoxypropylchloride Chloromethyl oxirane 2-Chloropropylene oxide	92.5 3.19 r 112 v	1.18	116 241 °F	16.3	28 82 °F	2.3 (89)	2.3 (89)	3.8 (146)	3.8 (146)	2.3 (89)	385 IIB T2
187	1,2-Epoxybutane CAS 106-88-7 C ₄ H ₈ O	C ₄ H ₈ O	Butylene oxide Ethyl oxirane 1,2-Butylen oxide	72.1 2.49 r 81 v	0.83	65 149 °F	177	-15 5 °F	1.5 (45)			1.7 (51)		370 T2
188	Ethane CAS 74-84-0 C ₂ H ₆	C ₂ H ₆	Methylmethane Dimethyl R170	30.1 1.04 r	Gas	-89 -128 °F	Gas	Gas	2.4 (30)	2.4 (30)		3.0 (38)	2.5 (31)	515 IIA T1
189	Ethanol CAS 64-17-5 C ₂ H ₅ OH	EtOH C ₂ H ₆ O	Ethyl alcohol Methylcarbinol	46.1 1.59 r 113 v	0.79	78 172 °F	58	12 54 °F	3.1 (60)	3.1 (60)	3.3 (63)	3.3 (63)	3.1 (60)	400 IIB T2
190	Ethanol amine CAS 141-43-5 NH ₂ C ₂ H ₄ OH	C ₂ H ₇ NO	2-Aminoethanol 2-Hydroxyethylamine Colamine	61.1 2.11 r	1.02	172 342 °F	0.5	85 185 °F			3.0 (76)	3.0 (76)		410 IIA T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
179	200 (852)	500 (2129)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 25 / 100 %LEL 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
180			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
181			EC	Polytron 7000 and P 8100 Hydrides	DS: 5 / 20 / 20 ppm / LDL = 0.3 ppm	S = 0.1
182		10 (54)	IR	PIR 7000 type 334, P 8700 type 334	25 / 25 %LEL	only for concentrations < 25 %LEL
183			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	polymerizing - sensor poison
184			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	75 / 100 %LEL (&) 100 %LEL (&) 55 / 100 %LEL (&) 100 %LEL (&)	
185			IR IR	PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL (?) 100 %LEL (?)	
186	2T (7.7)	5 (19)	CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV2	100 %LEL 30 / 100 %LEL // 6900 ppm Gas-Library 50 + 100 %LEL Gas-Library 40 / 100 %LEL // 9200 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL (?) ECH: 20 / 50 / 100 ppm / LDL = 5 ppm	corrosive/sensor poison performance approved performance approved performance approved performance approved S = 0.45
187	1 (3.0)		CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?) as PO x 2 (20 / 50 / 200 ppm x 2)	S = 0.4 (L)
188			CT IR IR IR IR IR OP	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron Pulsar 2	10 // 100 %LEL 20 / 100 %LEL // 3750 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 15 / 100 %LEL // 2500 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL 1 // 4 / 8 LELm	CSF = 1.40 (Propane = 1.00) / LEL = 3.0
189	500 (960)	1000 (1921)	CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	10 // 100 %LEL 15 / 100 %LEL // 4650 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 5 / 100 %LEL // 1550 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL EtOH: 100 / 200 / 300 ppm / LDL = 10 ppm	performance approved with sensor ... DD performance approved performance approved performance approved performance approved performance approved S = 0.6
190	0.2 (0.51)	3 (7.6)	IR	PIR 7000 type 340, P 8700 type 340	10 / 10 %LEL (&)	only for concentrations < 10 %LEL

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
191	2-Ethoxyethanol CAS 110-80-5 C ₂ H ₅ OC ₂ H ₄ OH	EGEE C ₄ H ₁₀ O ₂	Ethyl glycol Ethylene glycol monoethyl ether Ethyl cellosolve Monoethyl glycol ether Oxitol	90.1 3.11 r	0.93	135 275 °F	5	40 104 °F	1.8 (68)	1.7 (64)	1.7 (64)	1.7 (64)	1.8 (68)	235 IIB T3
192	2-Ethoxyethyl acetate CAS 111-15-9 CH ₃ COOC ₂ H ₄ OC ₂ H ₅	EGEEA C ₆ H ₁₂ O ₃	2-Ethoxyethanol acetate Ethyl glycol acetate Ethylene glycol monoethyl ether acetate Acetic acid 2-ethoxyethylester Cellosolve acetate	132.2 4.56 r	0.98	156 313 °F	2.7	51 124 °F	1.2 (66)	1.2 (66)	1.7 (94)	1.7 (94)	1.2 (66)	380 IIA T2
193	1-Ethoxy-2-propanol CAS 1569-02-4 C ₂ H ₅ OCH ₂ CH(OH)CH ₃	PGEE C ₆ H ₁₂ O ₂	1-Ethoxypropan-2-ol Propylene glycol monoethyl ether 2-Propylenglycol-1-ethylether	104.2 3.60 r	0.90	130 266 °F	10	42 108 °F	1.3 (56)		1 mg/m ³ = 0.23 ppm			255 IIB T3
194	Ethoxy trifluoro butenone CAS 17129-06-5 C ₂ H ₅ OCH=CHC(O)CF ₃	ETFBO C ₆ H ₇ F ₃ O ₂	4-Ethoxy-1.1.1-trifluoro-3-buten-2-one	168.1 5.80 r	1.18	159 318 °F	3		1.4* (98)		1 mg/m ³ = 0.14 ppm			
195	Ethyl acetate CAS 141-78-6 CH ₃ COOC ₂ H ₅	C ₄ H ₈ O ₂	Acetic acid ethyl ester Ethanoic acid ethyl ester Ethyl ethanoate	88.1 3.04 r 122 v	0.90	77 171 °F	98	-4 25 °F	2.0 (73)	2.0 (73)	2.0 (73)	2.0 (73)	2.2 (81)	470 IIA T1
196	Ethyl acrylate CAS 140-88-5 CH ₂ =CHCOOC ₂ H ₅	C ₉ H ₈ O ₂	Acrylic acid ethyl ester 2-Propenoic acid ethyl ester Ethyl propenoate	100.1 3.46 r 115 v	0.92	100 212 °F	39	9 48 °F	1.7 (71)	1.4 (58)	1.4 (58)	1.4 (58)	1.4 (58)	350 IIB T2
197	Ethylamine CAS 75-04-7 C ₂ H ₅ NH ₂	C ₂ H ₇ N	Aminoethane Monoethylamine Ethane amine R631	45.1 1.56 r	Gas	17 63 °F	Gas	Gas	3.5 (66)	3.5 (66)	3.5 (66)	3.5 (66)	2.68 (50)	385 IIA T2
198	Ethylbenzene CAS 100-41-4 C ₆ H ₅ C ₂ H ₅	C ₈ H ₁₀	Phenylethane Ethylbenzol	106.2 3.67 r 76 v	0.87	136 277 °F	9.8	23 73 °F	1.0 (44)	0.8 (35)	0.8 (35)	0.8 (35)	1.0 (44)	430 IIB T2
199	Ethylbromide CAS 74-96-4 C ₂ H ₅ Br	C ₂ H ₅ Br	Bromoethane Bromoethyl Monobromoethane	109.0 3.76 r 312 v	1.46	38 100 °F	513	n. a.	6.7 (304)	6.7 (304)	6.8 (309)	6.8 (309)	6.7 (304)	510 IIB T1

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
191	2 (7.5)	200 (751)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
192	2 (11)	100 (551)	IR IR	PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL (?) 100 %LEL (?)	
193	50 (217)		CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	100 %LEL 25 / 100 %LEL // 3250 ppm Gas-Library 50 + 100 %LEL Gas-Library 10 / 100 %LEL // 1300 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL (?)	
194			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	40 / 100 %LEL 50 + 100 %LEL 35 / 100 %LEL 50 + 100 %LEL 100 %LEL (?)	
195	200 (734)	400 (1468)	CT IR IR IR IR IR OP	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron Pulsar 2	10 // 100 %LEL 20 / 100 %LEL // 3300 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 20 / 100 %LEL // 3300 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL 1 // 4 / 8 LELm	performance approved with sensor ... DD performance approved performance approved performance approved performance approved performance approved CSF = 0.68 (Propane = 1.00) / LEL = 2.0
196	2 (8.3)	25 (104)	IR IR IR IR IR EC	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	25 / 100 %LEL 50 + 100 %LEL 25 / 100 %LEL 50 + 100 %LEL 100 %LEL as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
197	5 (9.4)	10 (19)	CT IR IR IR IR IR EC EC EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 NH3 LC Polytron 7000 and P 8100 NH3 TL Polytron 8100 NH3 FL	10 // 100 %LEL 100 %LEL (\$) 100 %LEL (\$) 100 %LEL (\$) 100 %LEL (\$) 100 %LEL (\$) EA: 100 ppm / LDL = 5 ppm EA: 100 ppm / LDL = 1 ppm EA: 100 ppm / LDL = 1 ppm	corrosive/sensor poison S = 0.7 S = 1.0* S = 1.0* / Polytron 8100 only
198	20 (89)	100 (443)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 30 / 100 %LEL // 2400 ppm Gas-Library 50 + 100 %LEL Gas-Library 30 / 100 %LEL // 2400 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL	
199		200 (908)	IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	20 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
200	Ethyl-tert-butylether CAS 637-92-3 C ₂ H ₅ OC(CH ₃) ₃	ETBE C ₈ H ₁₄ O	tert-Butyl ethyl ether 2-Methyl-2-ethoxy propane 2-Ethoxy-2-methyl propane Ethyl-1.1-dimethyl ethyl ether	102.2 3.53 r 103 v	0.74	73 163 °F	135	-19 -2 °F	1.2 (51)		1 mg/m ³ = 0.23 ppm			
201	Ethylchloride CAS 75-00-3 C ₂ H ₅ Cl	C ₂ H ₅ Cl	Chloroethyl Chloroethane Monochloroethane R160	64.5 2.23 r	Gas	12 54 °F	Gas	Gas	3.6 (97)	3.6 (97)	3.8 (102)	3.8 (102)	3.6 (97)	510 IIA T1
202	Ethyl chloroformate CAS 541-41-3 ClCOOC ₂ H ₅	C ₃ H ₅ ClO ₂	Ethoxycarbonyl chloride Ethyl chlorocarbonate Chloroformic acid ethyl ester Ethyl chloromethanoate	108.5 3.75 r	1.14	93 199 °F	55	16 61 °F	3.7* (167)		1 mg/m ³ = 0.22 ppm			500 IIA T1
203	Ethylcyclobutane CAS 4806-61-5 (CH ₂) ₃ CHC ₂ H ₅	C ₆ H ₁₂	Ethylcyclobutylmethylene	84.2 2.91 r 86 v	0.73	71 160 °F		<-20 <-4 °F	1.2 (42)	1.2 (42)		1.2 (42)	1.2 (42)	210 IIA T3
204	Ethylcyclohexane CAS 1678-91-7 (CH ₂) ₅ CHC ₂ H ₅	C ₈ H ₁₆	Ethylhexamethylene	112.2 3.87 r 80 v	0.79	132 270 °F	13	<21 <70 °F	0.9 (42)	0.9 (42)		0.9 (42)	0.9 (42)	260 IIA T3
205	Ethylcyclopentane CAS 1640-89-7 (CH ₂) ₄ CHC ₂ H ₅	C ₇ H ₁₄	Ethylpentamethylene	98.2 3.39 r 88 v	0.77	103 217 °F	41	<21 <70 °F	1.1 (45)	1.05 (43)		1.1 (45)	1.05 (43)	260 IIA T3
206	Ethylene CAS 74-85-1 CH ₂ =CH ₂	C ₂ H ₄	Ethene Olefiant gas R1150	28.1 0.97 r	Gas	-104 -155 °F	Gas	Gas	2.4 (28)	2.3 (27)		2.7 (32)	2.3 (27)	440 IIB T2
207	Ethylenediamine CAS 107-15-3 NH ₂ -C ₂ H ₄ -NH ₂	EDA C ₂ H ₆ N ₂	1.2-Diaminoethane 1.2-Ethanediamine Dimethylenediamine	60.1 2.07 r	0.90	116 241 °F	12.4	34 93 °F		2.5 (63)	2.5 (63)	2.5 (63)	2.7 (68)	385 IIA T2
208	Ethylene glycol CAS 107-21-1 HOCH ₂ CH ₂ OH	C ₂ H ₆ O ₂	1.2-Ethandiol Ethane-1.2-diol 1.2-Dihydroxyethane Glycol 2-Hydroxyethanol	62.1 2.14 r	1.11	197 387 °F	0.07	111 232 °F	3.2 (83)		3.2 (83)	3.2 (83)		410 IIB T2
209	Ethylene imine CAS 151-56-4 (CH ₂) ₂ NH	C ₂ H ₅ N	Aziridine Aminoethylene Azirane Azacyclopropane	43.1 1.49 r 117 v	0.83	55 131 °F	227	-13 9 °F	3.6 (65)	3.3 (59)	3.3 (59)	3.3 (59)		320 IIB T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
200			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
201	40 (108)	1000 (2688)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 7200 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 5400 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
202			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
203			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
204			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
205			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
206			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL // 9200 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			IR	GasSecure GS01	100 %LEL	not measurable by ultrasonic sensor
			EC	Polytron 7000 and P 8100 OV1	C2H4: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 1.3
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	Special version for Ethylene
207		10 (25)	IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	as NH3 x 5 (50 / 100 ppm x 5)	S = 0.2 (L)
208	10 (26)		IR	PIR 7000 type 340, P 8700 type 340	10 / 10 %LEL (&)	only for concentrations < 10 %LEL
209			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	corrosive/sensor poison

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
210	Ethylene oxide CAS 75-21-8 C ₂ H ₄ O	EO C ₂ H ₄ O	1,2-Epoxyethane Oxirane Dimethylene oxide	44.1 1.52 r	Gas 50 °F 1 ppm = 1.84 mg/m ³	10 50 °F	Gas	Gas -4 °F	2.6 (48)	2.6 (48)	3.0 (55)	3.0 (55)	2.6 (48)	435 IIB T2
211	Ethyl formate CAS 109-94-4 HCOOC ₂ H ₅	C ₃ H ₆ O ₂	Ethyl methanoate Formic acid ethyl ester Methanoic acid ethyl ester	74.1 2.56 r 136 v	0.92 129 °F 1 ppm = 3.09 mg/m ³	54 129 °F	266	-20 -4 °F	2.7 (83)	2.7 (83)	2.8 (86)	2.8 (86)	2.7 (83)	445 IIA T2
212	2-Ethylhexanal CAS 123-05-7 C ₄ H ₉ CH(C ₂ H ₅)CHO	C ₈ H ₁₆ O	2-Ethyl-1-hexanal 2-Ethylhexaldehyde 2-Ethyl caproaldehyde Butyl ethyl acetaldehyde	128.2 4.43 r	0.82 325 °F 1 ppm = 5.34 mg/m ³	163 325 °F	2.4	42 108 °F		0.9 (48)		0.85 (45)		185 IIA T4
213	2-Ethylhexanoic acid CAS 149-57-5 CH ₃ (CH ₂) ₃ CH(C ₂ H ₅)COOH	2-EHA C ₈ H ₁₆ O ₂	2-Ethylcaproic acid i-Octanoic acid 3-Heptane carboxylic acid 2-Ethylhexoic acid	144.2 4.98 r	0.91 441 °F 1 ppm = 6.01 mg/m ³	227 441 °F	0.04	105 221 °F	0.8 (48)					1 mg/m ³ = 0.17 ppm IIA
214	2-Ethylhexyl acrylate CAS 103-11-7 CH ₂ =CHCOOCH ₂ CH(C ₂ H ₅)C ₄ H ₉	C ₁₇ H ₃₀ O ₂	2-Propenoic acid-2-ethylhexyl ester 2-Ethylhexyl-2-propenoate Acrylic acid (2-ethylhexyl)ester	184.3 6.36 r	0.89 417 °F 1 ppm = 7.68 mg/m ³	214 417 °F	0.13	82 180 °F	0.8 (61)	0.7 (54)		0.7 (54)		245 T3
215	2-Ethyl-1-hexylamine CAS 104-75-6 C ₄ H ₉ CH(C ₂ H ₅)CH ₂ NH ₂	C ₈ H ₁₉ N	2-Ethylhexylamine 1-Amino-2-ethylhexane 2-Ethyl-1-hexanamine i-Octylamine Isooctylamine 3-Aminomethyl heptane	129.3 4.46 r	0.79 336 °F 1 ppm = 5.39 mg/m ³	169 336 °F	1.59	50 122 °F	0.8* (43)					1 mg/m ³ = 0.19 ppm 265 IIA T3
216	5-Ethylidene-2-norbornene CAS 16219-75-3 CH ₃ CH=C ₇ H ₈	ENB C ₉ H ₁₂	Ethylidene norbornene 5-Ethylidene-8.9.10-trinorborn-2-ene 5-Ethylidenebicyclo(2.2.1)hept-2-ene	120.2 4.15 r	0.89 295 °F 1 ppm = 5.01 mg/m ³	146 295 °F	5.6		0.8* (40)					1 mg/m ³ = 0.20 ppm
217	Ethyl lactate CAS 97-64-3 CH ₃ CH(OH)COOC ₂ H ₅	C ₆ H ₁₀ O ₃	Hydroxypropionic acid ethyl ester Lactic acid ethyl ester Propanoic acid 2-hydroxy ethylester	118.1 4.08 r	1.03 309 °F 1 ppm = 4.92 mg/m ³	154 309 °F	2	46 115 °F	1.5 (74)			1.5 (74)		400 IIA T2
218	Ethyl mercaptan CAS 75-08-1 C ₂ H ₅ SH	EtM C ₂ H ₆ S	Ethanethiol Mercaptoethane Ethyl sulfhydrate Thioethyl alcohol	62.1 2.14 r 129 v	0.84 95 °F 1 ppm = 2.59 mg/m ³	35 95 °F	576	<-20 <-4 °F	2.8 (72)	2.8 (72)	2.8 (72)	2.8 (72)	2.8 (72)	295 IIB T3
219	Ethyl methacrylate CAS 97-63-2 CH ₂ =C(CH ₃)COOC ₂ H ₅	EMA C ₆ H ₁₀ O ₂	Methacrylic acid ethylester 2-Methyl-2-propenoic acid ethylester Ethyl methyl acrylate Ethyl-2-methyl-2-propenoate	114.1 3.94 r 110 v	0.91 243 °F 1 ppm = 4.75 mg/m ³	117 243 °F	16	19 66 °F	1.4 (67)	1.5 (71)		1.8 (86)	1.5 (71)	1 mg/m ³ = 0.21 ppm IIA
220	N-Ethylpiperidine CAS 766-09-6 C ₂ H ₅ N(CH ₂) ₅	EPP C ₇ H ₁₅ N	1-Ethylpiperidine	113.2 3.91 r	0.82 268 °F 1 ppm = 4.72 mg/m ³	131 268 °F	10.3	17 63 °F	1.9* (90)					1 mg/m ³ = 0.21 ppm
221	Ethylpropionate CAS 105-37-3 C ₂ H ₅ COOC ₂ H ₅	C ₅ H ₁₀ O ₂	Propionic acid ethylester Ethyl propanoate Propanoic acid ethylester	102.1 3.52 r 129 v	0.89 210 °F 1 ppm = 4.25 mg/m ³	99 210 °F	27	12 54 °F	1.8 (77)			1.9 (81)		455 IIA T1

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
210	1T (1.8)	1 (1.8)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD performance approved performance approved performance approved performance approved S = 1.0 S = 1.0
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 3900 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL // 7800 ppm Gas-Library	
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	EO: 20 / 50 / 200 ppm / LDL = 5 ppm	
			EC	Polytron 7000 and P 8100 OV2	EO: 20 / 50 / 100 ppm / LDL = 5 ppm	
			EC	Polytron 5100 OV1	EO: 20 + 30 + 50 + 100 + 200 ppm	
			EC	Polytron 5100 OV2	EO: 20 + 30 + 50 + 100 ppm	
EC	Polytron 3000 C2H4O	50 ppm				
211	100 (309)	100 (309)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	S = 0.4 (L)
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as Et2O (50 / 50 / 200 ppm)	
212			IR	PIR 7000 type 334, P 8700 type 334	60 / 100 %LEL	
			IR	Polytron 5700 type 334	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
213			IR	PIR 7000 type 340, P 8700 type 340	10 / 10 %LEL (&)	only for concentrations < 10 %LEL
214	5 (38)		IR	PIR 7000 type 334, P 8700 type 334	40 / 40 %LEL (&)	only for concentrations < 40 %LEL
			IR	PIR 7000 type 340, P 8700 type 340	20 / 30 %LEL (&)	only for concentrations < 30 %LEL
215			IR	PIR 7000 type 334, P 8700 type 334	65 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
216	5 (25)		IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
217			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
218	0.5 (1.3)	0.5c (1.3)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	S = 0.5
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 H2S LC	EtM: 20 / 50 / 100 ppm / LDL = 1 ppm	
219			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	S = 0.2 (L)
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as Et2O x 2 (50 / 50 / 200 ppm x 2)	
220			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
221			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
222	Ethylpropylether CAS 628-32-0 C ₂ H ₅ OC ₃ H ₇	C ₅ H ₁₂ O	1-Ethoxypropane Propylethylether	88.2 3.04 r 128 v	0.73	64 147 °F	194	<-20 <-4 °F	1.7 (62)			1.7 (62)		IIB
											1 mg/m ³ = 0.27 ppm			
223	Ethyl vinyl ether CAS 109-92-2 CH ₂ =CHOC ₂ H ₅	EVE C ₄ H ₈ O	Vinyl ethyl ether Ethoxyethene	72.1 2.49 r 102 v	0.75	36 97 °F	561	<-20 <-4 °F	1.7 (51)			1.7 (51)		200 IIB T4
											1 mg/m ³ = 0.33 ppm			
224	Fluorine CAS 7782-41-4 F ₂	F ₂		38.0 1.31 r	Gas	-188 -306 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.63 ppm			
225	Fluorobenzene CAS 462-06-6 C ₆ H ₅ F	MFB C ₆ H ₅ F	Monofluorobenzene Phenyl fluoride	96.1 3.32 r 76 v	1.03	85 185 °F	81	-15 5 °F	1.3* (52)					IIA
											1 mg/m ³ = 0.25 ppm			
226	Formaldehyde CAS 50-00-0 HCHO	CH ₂ O	Methanal Methyl aldehyde Oxomethane Methylene oxide	30.0 1.04 r	Gas	-19 -2 °F	Gas	Gas	7.0 (88)	7.0 (88)	7.0 (88)	7.0 (88)	7.0 (88)	424 IIB T2
											1 mg/m ³ = 0.80 ppm			
227	Formic acid CAS 64-18-6 HCOOH	CH ₂ O ₂	Methanoic acid Hydrogen carboxylic acid	46.0 1.59 r	1.22	101 214 °F	45	45 113 °F	16.4 (314)	18.0 (345)	18.0 (345)	18.0 (345)	10.0 (192)	520 IIA T1
											1 mg/m ³ = 0.52 ppm			
228	Furan CAS 110-00-9 (CH) ₄ O	Oxol C ₄ H ₄ O	Furfuran 1,4-Epoxy-1,3-butadiene Oxacyclopentadiene Divinylene oxide	68.1 2.35 r 104 v	0.94	32 90 °F	658	<-20 <-4 °F	2.3 (65)	2.3 (65)		2.3 (65)	2.3 (65)	390 IIB T2
											1 mg/m ³ = 0.35 ppm			
229	Furfuraldehyde CAS 98-01-1 C ₄ H ₃ OCHO	C ₅ H ₄ O ₂	Furfural 2-Furaldehyde 2-Furancarboxyaldehyde 2-Furylmethanal Fural	96.1 3.32 r	1.16	162 324 °F	1.5	60 140 °F	2.1 (84)	2.1 (84)	2.1 (84)	2.1 (84)	2.1 (84)	316 IIB T2
											1 mg/m ³ = 0.25 ppm			
230	Furfuryl alcohol CAS 98-00-0 C ₄ H ₃ OCH ₂ OH	C ₅ H ₆ O ₂	Furfur alcohol 2-Furylmethanol 2-Hydroxymethylfuran 2-Furancarbinol	98.1 3.39 r	1.13	171 340 °F	0.53	75 167 °F	1.8 (74)	1.8 (74)	1.8 (74)	1.8 (74)	1.8 (74)	390 IIB T2
											1 mg/m ³ = 0.24 ppm			
231	Germanium hydride CAS 7782-65-2 GeH ₄	H ₄ Ge	Germane Germanium tetrahydride Germanomethane Tetrahydrogermane	76.6 2.64 r	Gas	-88.5 -127 °F	Gas		2.0* (64)					
											1 mg/m ³ = 0.31 ppm			
232	Germanium tetrachloride CAS 10038-98-9 GeCl ₄	Cl ₄ Ge	Tetrachlorogermane	214.4 7.40 r	1.88	82 180 °F	97	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.11 ppm			
233	Germanium tetrafluoride CAS 7783-58-6 GeF ₄	F ₄ Ge	Tetrafluorogermane	148.6 5.13 r	Gas	-37 -35 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
											1 mg/m ³ = 0.16 ppm			
234	Heptamethyl trisiloxane CAS 1873-88-7 (CH ₃) ₃ SiO) ₂ Si(H)CH ₃	C ₇ H ₂₂ O ₂ Si ₃	Bis(trimethylsiloxy)methylsilane 1.1.1.3.5.5.5-Heptamethyltrisiloxane Methylbis(trimethylsiloxy)silane	222.5 7.68 r	0.82	142 288 °F			0.5* (46)					
											1 mg/m ³ = 0.11 ppm			
235	n-Heptane CAS 142-82-5 C ₇ H ₁₆	C ₇ H ₁₆		100.2 3.46 r 74 v	0.68	98 208 °F	47	-7 19 °F	0.8 (33)	0.85 (35)	1.05 (44)	1.0 (42)	1.1 (46)	220 IIA T3
											1 mg/m ³ = 0.24 ppm			
236	1-Heptanol CAS 111-70-6 C ₇ H ₁₅ OH	C ₇ H ₁₅ O	Heptan-1-ol Heptyl alcohol 1-Hydroxyheptane	116.2 4.01 r	0.82	175 347 °F	0.15	70 158 °F	0.9 (44)	0.9 (44)			1.0 (48)	275 IIB T3
											1 mg/m ³ = 0.21 ppm			

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
222			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
223			CT IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 Polytron 7000 and P 8100 OV1	100 %LEL 100 %LEL (?) 100 %LEL (?) as EO x 2 (20 / 50 / 200 ppm x 2)	polymerizing/sensor poison S = 0.5 (L)
224	1 (1.6)	0.1 (0.16)	EC	Polytron 7000 and P 8100 Cl2	F2: 1 / 10 / 100 ppm / LDL = 0.05 ppm	S = 1.0
225			IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334	70 / 100 %LEL 100 %LEL	
226	0.3 (0.38)	0.75 (0.94)	IR EC	PIR 7000 type 340, P 8700 type 340 Polytron 7000 and P 8100 OV1	10 / 10 %LEL (&) FYDE: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 1.0
227	5 (9.6)	5 (9.6)	EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
228			CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and P 8100 OV1	10 // 100 %LEL as Et2O (50 / 50 / 200 ppm)	S = 0.4 (L)
229		5 (20)	EC	Polytron 7000 and P 8100 OV1	as Aald (50 / 100 / 200 ppm)	S = 0.3 (L)
230		50 (204)	EC	Polytron 7000 and P 8100 OV1	as IPA (100 / 200 / 300 ppm)	S = 0.35 (L)
231		0.2 (0.64)	EC EC	Polytron 7000 and P 8100 Hydrides Polytron 7000 and P 8100 Hydrides SC	GeH4: 0.3 / 1 / 20 ppm / LDL = 0.05 ppm GeH4: 0.3 / 1 / 5 ppm / LDL = 0.02 ppm	S = 0.6 S = 0.5
232			EC EC	Polytron 7000 and P 8100 AC Polytron 7000 and P 8100 HCl	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm as SiCl4 (5 / 10 / 20 ppm)	
233			EC	Polytron 7000 and P 8100 AC	GeF4: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
234			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	40 / 100 %LEL 50 + 100 %LEL 25 / 100 %LEL 50 + 100 %LEL	
235	500 (2088)	500 (2088)	CT IR IR IR IR IR OP	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron Pulsar 2	10 // 100 %LEL 25 / 100 %LEL // 1700 ppm Gas-Library 50 + 100 %LEL Gas-Library 10 / 100 %LEL // 425 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL 1 // 4 / 8 LELm	CSF = 0.67 (Propane = 1.00) / LEL = 0.8
236			IR IR	PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL (?) 100 %LEL (?)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
237	2-Heptanone CAS 110-43-0 CH ₃ COC ₆ H ₁₁	MAK C ₇ H ₁₄ O	Heptan-2-one Methyl amyl ketone n-Amyl methyl ketone Methyl pentyl ketone	114.2 3.94 r	0.82	151 304 °F	4.5	40 104 °F		1.1 (52)	1.1 (52)	1.1 (52)	1.1 (52)	305 IIA T2
238	1-Heptene CAS 592-76-7 C ₆ H ₁₁ CH=CH ₂	C ₇ H ₁₄	Hept-1-ene 1-Heptylene	98.2 3.39 r 88 v	0.70	94 201 °F	64	-8 18 °F	1.0 (41)		1 mg/m ³ = 0.24 ppm			250 IIB T3
239	Hexamethyl cyclotrisiloxane CAS 541-05-9 Si ₃ O ₃ (CH ₃) ₆	HMCTS C ₆ H ₁₈ O ₃ Si ₃		222.5 7.68 r	1.02	134 273 °F			0.4* (37)		1 mg/m ³ = 0.11 ppm			
240	Hexamethyldisilazane CAS 999-97-3 (CH ₃) ₃ Si-NH-Si(CH ₃) ₃	HMDS C ₆ H ₁₈ NSi ₂	Bis-trimethylsilyl-amine Tetramethyl-3-aza-2.4-disilapentane	161.4 5.57 r	0.77	127 261 °F	20		0.8* (54)		1 mg/m ³ = 0.15 ppm			
241	Hexamethyldisiloxane CAS 107-46-0 (CH ₃) ₃ Si-O-Si(CH ₃) ₃	HMDSO C ₆ H ₁₈ OSi ₂	Tetramethyl-3-oxa-2.4-disilapentane	162.4 5.61 r 93 v	0.76	101 214 °F	20	-8 18 °F	0.7 (47)		1 mg/m ³ = 0.15 ppm			310 IIB T2
242	n-Hexane CAS 110-54-3 C ₆ H ₁₄	C ₆ H ₁₄	Hexyl hydride	86.2 2.98 r 81 v	0.66	69 156 °F	162	<-20 <-4 °F	1.0 (36)	1.0 (36)	1.1 (40)	1.1 (40)	1.0 (36)	230 IIA T3
243	1-Hexanol CAS 111-27-3 C ₆ H ₁₃ OH	C ₆ H ₁₄ O	Hexan-1-ol Hexyl alcohol Amyl carbinol 1-Hydroxyhexane	102.2 3.53 r	0.82	157 315 °F	0.9	60 140 °F	1.1 (47)	1.1 (47)		1.2 (51)	1.2 (51)	280 IIB T3
244	2-Hexanone CAS 591-78-6 CH ₃ COC ₄ H ₉	MBK C ₆ H ₁₂ O	Hexan-2-one Methyl butyl ketone Butyl methyl ketone	100.2 3.46 r 93 v	0.81	128 262 °F	12.8	23 73 °F	1.2 (50)	1.2 (50)		1.2 (50)	1.2 (50)	420 IIA T2
245	3-Hexanone CAS 589-38-8 C ₂ H ₅ COC ₃ H ₇	C ₆ H ₁₂ O	Hexan-3-one Ethylpropylketone	100.2 3.46 r 76 v	0.82	123 253 °F	13.5	20 68 °F	1.0 (42)			1.0 (42)		IIA
246	1-Hexene CAS 592-41-6 C ₄ H ₉ CH=CH ₂	C ₆ H ₁₂	Hex-1-ene Butyl ethylene Hexylene	84.2 2.91 r 94 v	0.67	63 145 °F	199	<-20 <-4 °F	1.2 (42)			1.2 (42)		255 IIB T3
247	2-Hexene CAS 592-43-8 CH ₃ (CH ₂) ₂ CH=CHCH ₃	C ₆ H ₁₂	Hex-2-en	84.2 2.91 r	0.69	69 156 °F	193		1.2* (42)		1 mg/m ³ = 0.29 ppm			

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
237	50 (238)	100 (476)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
238			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)			
239			IR	PIR 7000 type 334, P 8700 type 334	65 / 100 %LEL	
			IR	Polytron 5700 type 334	100 % LEL	
			IR	PIR 7000 type 340, P 8700 type 340	50 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
240			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as MeOH (20 / 50 / 200 ppm)	
241			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 2450 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 1400 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as MeOH (20 / 50 / 200 ppm)	
242	50 (180)	500 (1796)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD performance approved performance approved performance approved performance approved performance approved CSF = 0.77 (Propane = 1.00) / LEL = 1.0
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2500 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 500 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	
243	50 (213)		IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
244	5 (21)	100 (418)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
245			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
246			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2400 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 960 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)			
247			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
248	n-Hexylamine CAS 111-26-2 C ₆ H ₁₃ NH ₂	C ₆ H ₁₅ N	1-Aminohexane 1-Hexanamine	101.2 3.49 r	0.77	131 268 °F	10.6	27 81 °F	2.1* (89)		1 mg/m ³ = 0.24 ppm			IIA
249	Hydrazine CAS 302-01-2 H ₂ N-NH ₂	H ₄ N ₂	Diazane Diamine	32.0 1.10 r	1.01	113 235 °F	21	40 104 °F	4.7 (63)		2.9 (39)			270 T3
250	Hydrogen CAS 1333-74-0 H ₂	H ₂	R 702	2.0 0.07 r	Gas	-253 -423 °F	Gas	Gas	4.0 (3.3)	4.0 (3.3)		4.0 (3.3)	4.0 (3.3)	560 IIC T1
251	Hydrogen bromide CAS 10035-10-6 HBr	HBr	Hydrobromic acid	80.9 2.79 r	Gas	-67 -89 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
252	Hydrogen chloride CAS 7647-01-0 HCl	HCl	Hydrochloric acid Muriatic acid	36.5 1.26 r	Gas	-85 -121 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
253	Hydrogen cyanide CAS 74-90-8 HCN	AC CHN	Hydrocyanic acid Formonitrile Prussic acid	27.0 0.93 r	0.69	26 79 °F	817	<-20 <-4 °F	5.4 (61)	5.4 (61)	5.6 (63)	5.6 (63)	5.4 (61)	535 IIB T1
254	Hydrogen fluoride CAS 7664-39-3 HF	HF-A HF	Hydrofluoric acid	20.0 0.69 r	Gas	19.5 67 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
255	Hydrogen iodide CAS 10034-85-2 HI	HI	Hydroiodic acid anhydrous	127.9 4.41 r	Gas	-35 -31 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
256	Hydrogen peroxide CAS 7722-84-1 H ₂ O ₂	H ₂ O ₂	Hydrogen dioxide Hydroperoxide Dihydrogen dioxide	34.0 1.17 r	1.24	107 225 °F	1.9	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
257	Hydrogen selenide CAS 7783-07-5 H ₂ Se	H ₂ Se	Selane Selenium hydride Dihydrogen selenide	81.0 2.80 r	Gas	-41 -42 °F	Gas		4.0* (135)					
258	Hydrogen sulfide CAS 7783-06-4 H ₂ S	H ₂ S	Hydrosulfuric acid Sulfuretted hydrogen Sulfane	34.1 1.18 r	Gas	-60 -76 °F	Gas	Gas	3.9 (55)	4.0 (57)	4.0 (57)	4.0 (57)	4.0 (57)	270 IIB T3
259	Isoprene CAS 78-79-5 CH ₂ =C(CH ₃)CH=CH ₂	C ₅ H ₈	2-Methyl-1,3-butadiene	68.1 2.35 r 62 v	0.68	34 93 °F	604	<-20 <-4 °F	1.0 (28)			1.5 (43)		220 IIB T3
260	Lead tetraethyl CAS 78-00-2 Pb(C ₂ H ₅) ₄	TEL C ₈ H ₂₀ Pb	Tetraethyl lead Tetraethylplumbane	323.4 11.16 r	1.65	180 356 °F	0.3	80 176 °F	1.8 (243)		1.8 (243)	1.8 (243)		
261	D-Limonene CAS 5989-27-5 CH ₂ C(CH ₃)C ₆ H ₈ CH ₃	C ₁₀ H ₁₆	p-Mentha-1,8-diene 1-Methyl-4-isopropenyl-1-cyclohexene 4-Isopropenyl-1-methyl cyclohexene (R)-(+)-Limonene Carvene	136.2 4.70 r	0.84	176 349 °F	2	48 118 °F	0.7 (40)					235 IIA T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
248			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	corrosive/sensor poison
249	0.017T (0.023)	1 (1.3)	CT EC EC EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and P 8100 Hydrazine Polytron 5100 Hydrazine Polytron 3000 Hydrazine	100 %LEL N2H4: 0.3 / 1 / 5 ppm / LDL = 0.02 ppm N2H4: 0.3 + 0.5 + 1 + 3 + 5 + 10 + 20 ppm 1 ppm	S = 1.0
250			CT EC EC EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and P 8100 H2 Polytron 5100 H2 Polytron 3000 H2	10 // 100 %LEL H2: 500 / 1000 / 3000 ppm / LDL = 15 ppm 50 + 100 + 200 + 300 + 500 + 1000 ppm 1000 or 3000 ppm	performance approved with sensor ... DD + 2000 + 3000 ppm
251	2 (6.7)	3c (10)	EC EC EC	Polytron 7000 and P 8100 AC Polytron 7000 and P 8100 HCl Polytron 3000 AC	HBr: 3 / 10 / 30 ppm / LDL = 0.5 ppm HBr: 20 / 30 / 100 ppm / LDL = 1 ppm 3 or 10 ppm	S = 1.0
252	2 (3.0)	5c (7.6)	EC EC EC EC	Polytron 7000 and P 8100 AC Polytron 7000 and P 8100 HCl Polytron 3000 AC Polytron 3000 HCl	HCl: 3 / 10 / 30 ppm / LDL = 0.5 ppm HCl: 20 / 30 / 100 ppm / LDL = 1 ppm 10 ppm 30 ppm	S = 1.0
253		10 (11)	EC EC EC EC	Polytron 7000 and P 8100 HCN Polytron 7000 and P 8100 HCN LC Polytron 5100 HCN LC Polytron 3000 HCN	HCN: 10 / 50 / 50 ppm / LDL = 1.5 ppm HCN: 5 / 50 / 50 ppm / LDL = 0.1 ppm 5 + 10 + 20 + 30 + 50 ppm 50 ppm	
254	1 (0.83)	3 (2.5)	EC EC EC	Polytron 7000 and P 8100 AC Polytron 5100 AC Polytron 3000 AC	HF: 3 / 10 / 30 ppm / LDL = 0.5 ppm HF: 3 + 5 + 10 + 20 + 30 ppm 10 ppm	
255			EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
256		1 (1.4)	EC EC EC	Polytron 7000 and P 8100 H2O2 HC Polytron 7000 and P 8100 H2O2 LC Polytron 5100 H2O2 LC	H2O2: 1000 / 4000 / 7000 ppm / LDL = 100 ppm H2O2: 1 / 5 / 300 ppm / LDL = 0.1 ppm 1 + 3 + 5 + 10 + 20 + 30 + 50 + 100 ppm	+ 200 + 300 ppm
257	0.015 (0.051)	0.05 (0.17)	EC	Polytron 7000 and P 8100 Hydrides	SeH2: 0.5 / 1 / 1 ppm / LDL = 0.3 ppm	S = 0.4
258	5 (7.1)	4 (5.7)	EC EC EC EC EC EC EC EC	Polytron 7000 and P 8100 H2S Polytron 7000 and P 8100 H2S HC Polytron 7000 and P 8100 H2S LC Polytron 5100 H2S Polytron 5100 H2S HC Polytron 5100 H2S LC Polytron 3000 H2S Polytron 2000 H2S	H2S: 5 / 50 / 100 ppm / LDL = 0.5 ppm H2S: 100 / 500 / 1000 ppm / LDL = 10 ppm H2S: 10 / 50 / 100 ppm / LDL = 1 ppm 5 + 10 + 20 + 30 + 50 + 100 ppm 100 + 200 + 300 + 500 + 1000 ppm 10 + 20 + 50 + 100 ppm 20 or 50 or 100 ppm 20 or 100 ppm	P 8100 performance approved (FM) P 8100 performance approved (FM)
259	3 (8.5)		CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	100 %LEL 35 / 100 %LEL 50 + 100 %LEL 45 / 100 %LEL 50 + 100 %LEL 100 %LEL	polymerizing/sensor poison
260	0.004 (0.054)	0.006 (0.081)	IR IR	PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL (?) 100 %LEL (?)	
261	5 (28)		IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	35 / 100 %LEL 50 + 100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
262	Mesityl oxide CAS 141-79-7 (CH ₃) ₂ C=CHCOCH ₃	MO C ₉ H ₁₀ O	4-Methyl-3-penten-2-one 4-Methylpent-3-en-2-one Methyl-i-butylene ketone Methyl-i-butenyl ketone i-Propylidene acetone Isopropylidene acetone Isobutenyl methyl ketone	98.1 3.39 r	0.85 266 °F 1 ppm = 4.09 mg/m ³	130 266 °F	11	24 75 °F		1.6 (65)	1.4 (57)	1.4 (57)	1.4 (57)	340 IIA T2
263	Methacrylic acid CAS 79-41-4 CH ₂ =C(CH ₃)COOH	C ₄ H ₆ O ₂	2-Methyl-2-propenoic acid a-Methylacrylic acid	86.1 2.97 r	1.02 322 °F 1 ppm = 3.59 mg/m ³	161 322 °F	0.87	74 165 °F	1.0 (36)			1.6 (57)		355 IIB T2
264	Methane CAS 74-82-8 CH ₄	CH ₄	Methyl hydride R50	16.0 0.55 r	Gas -260 °F 1 ppm = 0.67 mg/m ³	-162 -260 °F	Gas	Gas	4.4 (29)	4.4 (29)		5.0 (33)	4.4 (29)	595 IIA T1
265	Methanol CAS 67-56-1 CH ₃ OH	MeOH CH ₄ O	Methyl alcohol Carbinol	32.0 1.10 r 152 v	0.79 149 °F 1 ppm = 1.33 mg/m ³	65 149 °F	129	9 48 °F	6.0 (80)	6.0 (80)	6.0 (80)	6.0 (80)	5.5 (73)	440 IIA T2
266	3-Methoxybutanol CAS 2517-43-3 CH ₃ CH(OCH ₃)CH ₂ CH ₂ OH	C ₉ H ₁₂ O ₂	3-Methoxy-1-butanol 1.3-Butyleneglycol monomethyl ether	104.2 3.60 r	0.93 322 °F 1 ppm = 4.34 mg/m ³	161 322 °F	1.3	74 165 °F	1.5* (65)					IIB
267	4-Methoxy cyclohexanone CAS 13482-23-0 CH ₃ OCH(CH ₂) ₄ CO	C ₇ H ₁₂ O ₂	p-Methoxy cyclohexanone	128.2 4.43 r	0.98 372 °F 1 ppm = 5.34 mg/m ³	189 372 °F			1.2** (64)					
268	Methoxy dihydropyran CAS 4454-05-1 OCH=CH(CH ₂) ₂ CHOCH ₃	MDHP C ₉ H ₁₀ O ₂	3,4-Dihydro-2-methoxypyran 2-Methoxy-3,4-dihydropyran	114.1 3.94 r	1.00 261 °F 1 ppm = 4.75 mg/m ³	127 261 °F	13		1.0* (48)					
269	2-Methoxyethanol CAS 109-86-4 CH ₃ OC ₂ H ₄ OH	EGME C ₃ H ₈ O ₂	Ethylene glycol monomethyl ether Methyl glycol Glycol monomethyl ether Monomethyl glycol ether Methyl oxitol Methyl cellosolve	76.1 2.63 r	0.97 255 °F 1 ppm = 3.17 mg/m ³	124 255 °F	12	39 102 °F	2.5 (79)	1.8 (57)	1.8 (57)	1.8 (57)	2.4 (76)	285 IIB T3
270	1-Methoxy-2-propanol CAS 107-98-2 CH ₃ OCH ₂ CH(OH)CH ₃	PGME C ₄ H ₁₀ O ₂	Propylene glycol monomethyl ether 1.2-Propanediol-1-monomethyl ether 1-Methyl propylene glycol-2 1-Methoxy-2-hydroxypropane	90.1 3.11 r	0.92 248 °F 1 ppm = 3.75 mg/m ³	120 248 °F	13	32 90 °F	1.8 (68)		1.6 (60)	1.6 (60)		270 IIB T3
271	Methoxy propoxy propanol CAS 34590-94-8 CH ₃ OC ₃ H ₆ OC ₃ H ₆ OH	DPGME C ₇ H ₁₆ O ₃	Dipropylene glycol monomethyl ether Dipropylene glycol methyl ether (2-Methoxymethylethoxy)-1-propanol (2-Methoxymethylethoxy)propanol Methyl dipropylene glycol	148.2 5.12 r	0.95 363 °F 1 ppm = 6.18 mg/m ³	184 363 °F	0.7	70 158 °F	1.1 (68)	1.1 (68)	1.1 (68)	1.1 (68)		270 IIA T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
262	2 (8.2)	25 (102)	EC	Polytron 7000 and P 8100 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.6 (L)
263	50 (179)	20 (72)	EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
264			CT IR IR IR IR IR IR OP	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 GasSecure GS01 Polytron Pulsar 2	10 // 100 %LEL 15 / 100 %LEL // 6600 ppm // 100 vol% Gas-Libr. 20 + 50 + 100 %LEL // 100 vol-% Gas-Library 30 / 100 %LEL // 13200 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL 100 %LEL 1 // 4 / 8 LELm	performance approved with sensor ... DD performance approved performance approved performance approved performance approved performance approved min. conc. for ultrasonic sensor: 4400 ppm CSF = 1.57 (Propane = 1.00) / LEL = 4.4
265	200 (267)	200 (267)	CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	10 // 100 %LEL 10 / 100 %LEL // 5500 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 5 / 100 %LEL // 2500 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL (!) MeOH: 20 / 50 / 200 ppm / LDL = 5 ppm	performance approved with sensor ... DD performance approved performance approved performance approved performance approved performance approved S = 1.2
266			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	30 / 100 %LEL 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
267			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	60 / 100 %LEL (&) 100 %LEL (&) 35 / 100 %LEL (&) 50 + 100 %LEL (&)	
268			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	35 / 100 %LEL 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL	
269	1 (3.2)	25 (79)	CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	10 // 100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL as MeOH (20 / 50 / 200 ppm)	S = 1.4 (L)
270	100 (375)	100 (375)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 20 / 100 %LEL // 3200 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 10 / 100 %LEL // 1600 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	performance approved performance approved performance approved performance approved
271	50 (309)	100 (618)	IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	35 / 100 %LEL 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
272	1-Methoxy-2-propyl acetate CAS 108-65-6 CH ₃ COOC ₃ H ₆ OCH ₃	PGMEA C ₆ H ₁₂ O ₃	Acetic acid methoxy propylic ester 2-Methoxy-1-methylethyl acetate Propylene glycol methylether acetate 1-Methoxy-2-acetoxypropane	132.2 4.56 r	0.97	150 302 °F	3.1	43 109 °F	1.3 (72)			1.5 (83)		IIB
											1 mg/m ³ = 0.18 ppm			
273	Methyl acetate CAS 79-20-9 CH ₃ COOCH ₃	C ₃ H ₆ O ₂	Acetic acid methyl ester Methyl ethanoate Ethanoic acid methyl ester	74.1 2.56 r 154 v	0.93	57 135 °F	228	-13 9 °F	3.1 (96)	3.1 (96)	3.1 (96)	3.1 (96)	3.2 (99)	505 IIA T1
											1 mg/m ³ = 0.32 ppm			
274	Methyl acrylate CAS 96-33-3 CH ₂ =CHCOOCH ₃	C ₄ H ₆ O ₂	Acrylic acid methyl ester Methyl propenoate Methoxycarbonylethylene	86.1 2.97 r 113 v	0.95	80 176 °F	91	-3 27 °F	2.0 (72)	1.95 (70)	2.8 (100)	2.8 (100)	2.4 (86)	415 IIB T2
											1 mg/m ³ = 0.28 ppm			
275	Methylallylchloride CAS 563-47-3 CH ₂ =C(CH ₃)CH ₂ Cl	C ₄ H ₇ Cl	3-Chloro-2-methylprop-1-ene 2-Methylallyl chloride 3-Chloro-i-butene Methallyl chloride	90.6 3.13 r 140 v	0.93	72 162 °F	138	-12 10 °F	2.3 (87)	2.1 (79)		3.2 (121)		476 IIA T1
											1 mg/m ³ = 0.26 ppm			
276	Methylamine CAS 74-89-5 CH ₃ NH ₂	MA CH ₅ N	Aminomethane Monomethylamine R630	31.1 1.07 r	Gas	-6 21 °F	Gas	Gas	4.9 (63)	4.2 (54)	4.9 (63)	4.9 (63)	4.2 (54)	430 IIA T2
											1 mg/m ³ = 0.77 ppm			
277	Methyl-i-amyl ketone CAS 110-12-3 CH ₃ COCH ₂ CH ₂ CH(CH ₃) ₂	MiAK C ₇ H ₁₄ O	5-Methyl-2-hexanone i-Amyl methyl ketone Isoamyl methyl ketone i-Pentyl methyl ketone Isopentyl methyl ketone 2-Methyl-5-hexanone	114.2 3.94 r	0.89	144 291 °F	6.4	35 95 °F	1.0 (48)		1.0 (48)	1.0 (48)		455 IIA T1
											1 mg/m ³ = 0.21 ppm			
278	Methyl bromide CAS 74-83-9 CH ₃ Br	CH ₃ Br	Bromomethane Monobromomethane R40B1	94.9 3.28 r	Gas	4 39 °F	Gas	Gas	8.6 (340)		10.0 (395)	10.0 (395)		535 IIA T1
											1 mg/m ³ = 0.25 ppm			
279	2-Methylbutane CAS 78-78-4 CH ₃ CH(CH ₃)C ₂ H ₅	C ₅ H ₁₂	i-Pentane Isopentane Ethyl dimethyl methane Isoamyl hydride	72.2 2.49 r 94 v	0.62	28 82 °F	761	<-20 <-4 °F	1.3 (39)	1.3 (39)		1.4 (42)	1.3 (39)	420 IIA T2
											1 mg/m ³ = 0.33 ppm			
280	3-Methylbutanoic acid CAS 503-74-2 (CH ₃) ₂ CHCH ₂ COOH	3MBTA C ₆ H ₁₀ O ₂	3-Methylbutyric acid i-Pentanoic acid Isopentanoic acid i-Valeric acid Isovaleric acid	102.1 3.52 r	0.93	176 349 °F	0.5	78 172 °F	1.4 (60)					385 IIA T2
											1 mg/m ³ = 0.24 ppm			
281	2-Methyl-1-butanol CAS 137-32-6 C ₂ H ₅ CH(CH ₃)CH ₂ OH	C ₅ H ₁₂ O	2-Methyl butyl alcohol i-Pentanol Isopentanol sec-Butyl carbinol	88.2 3.04 r	0.82	129 264 °F	3.3	40 104 °F	1.2 (44)					340 IIA T2
											1 mg/m ³ = 0.27 ppm			

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
272	50 (275)		IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2100 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 700 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
273	200 (618)	200 (618)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
274	5 (18)	10 (36)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 6000 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL // 6000 ppm Gas-Library	
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as Aald x 2 (50 / 100 / 200 ppm x 2)	S = 0.15 (L)
275			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
276	10 (13)	10 (13)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 NH3 LC	MA: 100 ppm / LDL = 5 ppm	
EC	Polytron 7000 and P 8100 NH3 TL	MA: 100 ppm / LDL = 1 ppm	S = 1.0*			
			EC	Polytron 8100 NH3 FL	MA: 100 ppm / LDL = 1 ppm	S = 1.0* / Polytron 8100 only
277	20 (95)	100 (476)	IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
278	1 (4.0)	20c (79)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
279	1000 (3008)	1000 (3008)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 1950 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 650 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 1.02 (Propane = 1.00) / LEL = 1.3
280			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	30 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
281	20 (74)	100 (368)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
282	Methyl-tert-butyl ether CAS 1634-04-4 CH ₃ OC(CH ₃) ₃	MTBE C ₅ H ₁₂ O	tert-Butyl methyl ether 2-Methoxy-2-methyl propane 2-Methyl-2-methoxy propane	88.2 3.04 r 119 v	0.74	55 131 °F	270	<-20 <-4 °F	1.6 (59)	1.5 (55)		1.6 (59)	1.5 (55)	435 IIA T2
283	Methyl-i-butylketone CAS 108-10-1 (CH ₃) ₂ CHCH ₂ COCH ₃	MiBK C ₆ H ₁₂ O	4-Methyl-2-pentanone i-Propyl acetone Isopropyl acetone Isobutyl methylketone i-Butyl methylketone Hexone Methyl isobutyl ketone	100.2 3.46 r 94 v	0.80	116 241 °F	19	14 57 °F	1.2 (50)	1.2 (50)	1.2 (50)	1.2 (50)	1.2 (50)	475 IIA T1
284	2-Methyl-3-butyn-2-ol CAS 115-19-5 CHCC(CH ₃) ₂ OH	C ₆ H ₈ O	Dimethyl ethinyl carbinol Ethinyl dimethyl carbinol 3-Methyl butynol	84.1 2.90 r 98 v	0.86	104 219 °F	20	20 68 °F	1.6 (56)					350 IIB T2
285	Methyl chloride CAS 74-87-3 CH ₃ Cl	CH ₃ Cl	Chloromethyl Chloromethane Monochloromethane R40	50.5 1.74 r	Gas	-24 -11 °F	Gas	Gas	7.6 (160)	7.6 (160)	8.1 (170)	8.1 (170)	7.6 (160)	625 IIA T1
286	Methyl chloroformate CAS 79-22-1 ClCOOCH ₃	C ₂ H ₃ ClO ₂	Chloroformic acid methyl ester Methoxycarbonyl chloride Methyl chloromethanoate Methyl chlorocarbonate	94.5 3.26 r 362 v	1.22	72 162 °F	127	10 50 °F	7.5 (295)	7.5 (295)			7.5 (295)	475 IIA T1
287	Methylcyclohexane CAS 108-87-2 (CH ₂) ₅ CHCH ₃	MCH C ₇ H ₁₄	Hexahydrotoluene Cyclohexylmethane Toluene hexahydride	98.2 3.39 r 88 v	0.77	101 214 °F	48	-4 25 °F	1.1 (45)	1.0 (41)	1.2 (49)	1.2 (49)	1.15 (47)	260 IIA T3
288	Methylcyclopentane CAS 96-37-7 C ₆ H ₉ CH ₃	MCP C ₆ H ₁₂	Methylpentamethylene	84.2 2.91 r	0.75	72 162 °F	150	<-10 <14 °F		1.0 (35)		1.0 (35)	1.0 (35)	315 IIA T2
289	Methyl ethyl carbonate CAS 623-53-0 (CH ₃ O)CO(OC ₂ H ₅)	EMC C ₄ H ₈ O ₃	Carbonic acid ethyl methyl ester Ethyl methyl carbonate	104.1 3.59 r	1.01	107 225 °F	10.7		2.0** (87)					
290	Methylethyl ether CAS 540-67-0 C ₂ H ₅ OCH ₃	C ₃ H ₈ O	Ethylmethyl ether Methoxy ethane	60.1 2.07 r	Gas	7.4 45 °F	Gas	Gas	2.0 (50)	2.0 (50)		2.0 (50)	2.0 (50)	190 IIB T4
291	2-Methyl-4-ethylhexane CAS 3074-75-7 (CH ₃) ₂ CHCH ₂ CH(C ₂ H ₅) ₂	C ₉ H ₂₀	4-Ethyl-2-methylhexane i-Nonane Isnonane	128.3 4.43 r 78 v	0.72	134 273 °F		21 70 °F	0.7 (37)					280 IIA T3
292	Methyl ethyl ketone CAS 78-93-3 CH ₃ COC ₂ H ₅	MEK C ₄ H ₈ O	2-Butanone Butan-2-one Methyl propanone Ethyl methyl ketone Methyl acetone	72.1 2.49 r 84 v	0.80	80 176 °F	105	-10 14 °F	1.5 (45)	1.5 (45)	1.4 (42)	1.4 (42)	1.8 (54)	475 IIB T1

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
282	50 (184)		CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 20 / 100 %LEL // 2400 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 10 / 100 %LEL // 800 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	
283	20 (84)	100 (418)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 25 / 100 %LEL // 3000 ppm Gas-Library 50 + 100 %LEL Gas-Library 10 / 100 %LEL // 1200 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	performance approved performance approved performance approved performance approved
284	0.9 (3.2)		CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL (?) 100 %LEL (?) 100 %LEL (?)	
285	50 (105)	100 (210)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 20 / 100 %LEL // 15200 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 10 / 100 %LEL // 7600 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL (!)	corrosive/sensor poison performance approved performance approved performance approved performance approved
286	0.2 (0.79)		IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 / 100 %LEL // 7500 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 10 / 100 %LEL // 7500 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	performance approved performance approved performance approved performance approved
287	200 (818)	500 (2046)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	100 %LEL 30 / 100 %LEL // 3000 ppm Gas-Library 50 + 100 %LEL Gas-Library 5 / 100 %LEL // 500 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	performance approved
288	500 (1754)		IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	25 / 100 %LEL 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
289			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	20 / 100 %LEL 20 + 50 + 100 %LEL 25 / 100 %LEL 50 + 100 %LEL 100 %LEL	
290			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
291			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
292	200 (601)	200 (601)	CT IR IR IR IR IR OP	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron Pulsar 2	10 // 100 %LEL 35 / 100 %LEL // 4500 ppm Gas-Library 50 + 100 %LEL Gas-Library 25 / 100 %LEL // 3000 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL 1 // 4 / 8 LELm	performance approved with sensor ... DD performance approved performance approved performance approved performance approved CSF = 0.51 (Propane = 1.00) / LEL = 1.5

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
293	Methylethyl sulfide CAS 624-89-5 CH ₃ SC ₂ H ₅	C ₃ H ₆ S	Methylthioethane 2-Thiabutane	76.2 2.63 r 102 v	0.84	66 151 °F	198	<-15 <-5 °F	1.8 (57)		1 mg/m ³ = 0.31 ppm			IIA
294	Methylfluoride CAS 593-53-3 CH ₃ F	CH ₃ F	Fluoromethane R41	34.0 1.17 r	Gas	-78 -108 °F	Gas	Gas	5.6* (79)		1 mg/m ³ = 0.71 ppm			
295	Methyl formate CAS 107-31-3 HCOOCH ₃	C ₂ H ₄ O ₂	Formic acid methyl ester Methyl methanoate Methanoic acid methyl ester R611	60.1 2.07 r 193 v	0.97	32 90 °F	638	<-20 <-4 °F	5.0 (125)	5.0 (125)	4.5 (113)	4.5 (113)	5.0 (125)	450 IIA T2
296	2-Methylhexane CAS 591-76-4 (CH ₃) ₂ CHC ₄ H ₉	C ₇ H ₁₆	i-Heptane Isoheptane Dimethylbutylmethane	100.2 3.46 r 92 v	0.68	90 194 °F		-10 14 °F	1.0 (42)			1.0 (42)		280 IIA T3
297	3-Methylhexane CAS 589-34-4 C ₂ H ₅ CH(CH ₃)C ₃ H ₇	C ₇ H ₁₆	i-Heptane Isoheptane	100.2 3.46 r	0.69	92 198 °F		-11 12 °F			1 mg/m ³ = 0.24 ppm			280 IIA T3
298	Methyl hydrazine CAS 60-34-4 CH ₃ NH-NH ₂	MMH CH ₆ N ₂	Monomethylhydrazine	46.1 1.59 r 82 v	0.88	87 189 °F	50	-8 18 °F	2.5 (48)		2.5 (48)	2.5 (48)		190 T4
299	Methyl iodide CAS 74-88-4 CH ₃ I	Mel CH ₃ I	Iodomethane Halon 10001	141.9 4.90 r	2.28	42 108 °F	441		8.5 (503)		n. a.			355 T2
300	Methyl mercaptan CAS 74-93-1 CH ₃ SH	MeM CH ₄ S	Methanethiol Mercaptomethane Thiomethanol Methyl sulfhydrate	48.1 1.66 r	Gas	6 43 °F	Gas	Gas	4.1 (82)	4.1 (82)	3.9 (78)	3.9 (78)	4.1 (82)	360 IIA T2
301	Methyl methacrylate CAS 80-62-6 CH ₂ =C(CH ₃)COOCH ₃	MMA C ₆ H ₈ O ₂	Methacrylic acid methyl ester Methyl-2-methyl-2-propenoate 2-Methyl-2-propenoic acid methyl ester	100.1 3.46 r 113 v	0.94	101 214 °F	40	10 50 °F	1.7 (71)	1.7 (71)	1.7 (71)	1.7 (71)	1.7 (71)	430 IIA T2
302	N-Methyl morpholine CAS 109-02-4 (CH ₂) ₄ ONCH ₃	NMM C ₆ H ₁₁ NO	4-Methyl morpholine	101.2 3.49 r	0.91	116 241 °F	30	13 55 °F	2.2* (93)		1 mg/m ³ = 0.24 ppm			
303	2-Methyl pentane CAS 107-83-5 CH ₃ CH(CH ₃)C ₃ H ₇	C ₆ H ₁₄	Dimethylpropylmethane i-Hexane Isohexane	86.2 2.98 r 99 v	0.65	60 140 °F	227	<-20 <-4 °F	1.2 (43)			1.2 (43)		300 IIA T3
304	3-Methyl pentane CAS 96-14-0 CH ₃ CH ₂ CH(CH ₃)CH ₂ CH ₃	C ₆ H ₁₄	i-Hexane Isohexane Diethylmethylmethane 1,2,3-Trimethylpropane	86.2 2.98 r 98 v	0.66	63 145 °F	203	<-20 <-4 °F	1.2 (43)			1.2 (43)		300 IIA T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
293			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	Polytron 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (\$)	
			IR	Polytron 5700 type 340	100 %LEL (\$)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
294			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
295	50 (125)	100 (250)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
296	500 (2088)	500 (2088)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
297	500 (2088)	500 (2088)	IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
298			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	S = 0.6
			EC	Polytron 7000 and P 8100 Hydrazine	MMH: 1 / 1 / 5 ppm / LDL = 0.02 ppm	
299		5 (30)	EC	Polytron 7000 and P 8100 CO	CO: 50 / 300 / 1000 ppm	S approx. 1.0
300	0.5 (1.0)	10c (20)	EC	Polytron 7000 and P 8100 H2S LC	MeM: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.6
301	50 (209)	100 (417)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 4250 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 3400 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
302			EC	Polytron 7000 and P 8100 OV2	MMA: 20 / 50 / 100 ppm / LDL = 5 ppm	S = 0.5
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
303	500 (1796)		IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
304	500 (1796)		IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
305	4-Methyl-2-pentanol CAS 108-11-2 (CH ₃) ₂ CHCH ₂ CH(OH)CH ₃	MiBC C ₆ H ₁₄ O	4-Methylpentan-2-ol 1,3-Dimethyl butanol 4-Methyl-2-amyl alcohol 4-Methyl-2-pentyl alcohol Methyl-i-butyl carbinol Methyl isobutyl carbinol	102.2 3.53 r	0.81	131 268 °F	4.9	37 99 °F	1.0 (43)	1.14 (49)	1.0 (43)	1.1 (47)	1.14 (49)	335 IIA T2
306	Methylpropionate CAS 554-12-1 C ₂ H ₅ COOCH ₃	C ₄ H ₈ O ₂	Propanoic acid methylester Methylpropanoate	88.1 3.04 r 145 v	0.91	80 176 °F	84	-2 28 °F	2.4 (88)			2.5 (92)		465 T1
307	Methylpropylether CAS 557-17-5 CH ₃ OC ₃ H ₇	C ₄ H ₁₀ O	1-Methoxypropane Methyl-n-propylether	74.1 2.56 r 108 v	0.73	39 102 °F	507	<-20 <-4 °F	1.7 (52)					IIB
308	Methyl propyl ketone CAS 107-87-9 CH ₃ COC ₃ H ₇	MPK C ₆ H ₁₀ O	2-Pentanone Pentan-2-one Propyl methyl ketone 1-Ethyl acetone	86.1 2.97 r 99 v	0.81	102 216 °F	37	7 45 °F	1.5 (54)		1.5 (54)	1.5 (54)		445 IIA T2
309	Methyl-i-propyl ketone CAS 563-80-4 CH ₃ COCH(CH ₃) ₂	MIPK C ₆ H ₁₀ O	3-Methyl-2-butanone 3-Methyl butan-2-one 1,1-Dimethyl acetone i-Propyl methylketone Isopropyl methylketone 2-Acetyl propane	86.1 2.97 r 93 v	0.81	94 201 °F	53	-1 30 °F	1.4 (50)					475 IIA T1
310	2-Methylpyridine CAS 109-06-8 (C ₆ H ₄ N)CH ₃	C ₆ H ₇ N	Picoline 2-Picoline o-Picoline	93.1 3.21 r 87 v	0.94	128 262 °F	12	27 81 °F	1.4 (54)	1.2 (47)			1.2 (47)	535 IIA T1
311	3-Methylpyridine CAS 108-99-6 (C ₆ H ₄ N)CH ₃	C ₆ H ₇ N	3-Picoline m-Picoline	93.1 3.21 r	0.96	144 291 °F	6	36 97 °F	1.3 (50)	1.4 (54)			1.4 (54)	537 IIA T1
312	N-Methyl pyrrole CAS 96-54-8 C ₄ H ₄ NCH ₃	C ₅ H ₇ N	1-Methyl pyrrole 1-Methyl-1H-pyrrole	81.1 2.80 r	0.91	112 234 °F	22	15 59 °F						1 mg/m ³ = 0.30 ppm
313	N-Methyl-2-pyrrolidone CAS 872-50-4 (CH ₂) ₃ CONCH ₃	NMP C ₆ H ₉ NO	1-Methyl-2-pyrrolidinone 1-Methyl-2-pyrrolidone N-Methylpyrrolidone	99.1 3.42 r	1.03	203 397 °F	0.3	86 187 °F	1.5 (62)					265 IIA T3
314	Methylsilane CAS 992-94-9 SiH ₃ CH ₃	MMS CH ₆ Si	Silaethane Monomethylsilane	46.1 1.59 r	Gas	-58 -72 °F	Gas	Gas	1.3 (25)					160 T4
315	3-Methylstyrene CAS 100-80-1 CH ₃ C ₆ H ₄ CH=CH ₂	C ₉ H ₁₀	m-Methylstyrene 3-Vinytoluene m-Vinytoluene 1-Methyl-3-vinylbenzene 1-Ethenyl-3-methylbenzene	118.2 4.08 r	0.90	170 338 °F	3.5	45 113 °F	1.9* (94)					490 T1
316	4-Methylstyrene CAS 622-97-9 CH ₃ C ₆ H ₄ CH=CH ₂	C ₉ H ₁₀	p-Methylstyrene 4-Vinytoluene p-Vinytoluene 1-Methyl-4-vinylbenzene 1-Ethenyl-4-methylbenzene	118.2 4.08 r	0.90	170 338 °F	1.5	46 115 °F	1.1* (54)					490 T1
317	a-Methyl styrene CAS 98-83-9 C ₆ H ₅ C(CH ₃)=CH ₂	AMS C ₉ H ₁₀	(1-Methyl ethenyl)benzene 2-Phenyl propene i-Propenyl benzene Isopropenyl benzene 1-Methyl-1-phenylethylene	118.2 4.08 r	0.91	166 331 °F	3	40 104 °F	0.9 (44)	0.8 (39)	1.9 (94)	1.9 (94)	0.9 (44)	445 IIB T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
305	20 (85)	25 (106)	IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
306			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
IR	PIR 3000, P 5310, P 8310	100 %LEL (?)				
307			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
308	200 (718)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	Polytron 5700 type 334	100 %LEL (\$)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
IR	Polytron 5700 type 340	100 %LEL (?)				
309	200 (718)		CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
IR	Polytron 5700 type 340	100 %LEL (?)				
310			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
311			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
312			IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
313	20 (83)		IR	PIR 7000 type 340, P 8700 type 340	10 / 10 %LEL (\$)	only for concentrations < 10 %LEL
314			EC	Polytron 7000 and P 8100 Hydrides	MMS: 5 / 20 / 20 ppm / LDL = 0.05 ppm	S = 0.55
			EC	Polytron 7000 and P 8100 Hydrides SC	MMS: 1 / 5 / 20 ppm / LDL = 0.05 ppm	S = 0.65
315	100 (493)	50 (246)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	50 + 100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	50 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	50 + 100 %LEL (&)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
316	100 (493)	50 (246)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL (&)	
			IR	Polytron 5700 type 334	50 + 100 %LEL (&)	
			IR	PIR 7000 type 340, P 8700 type 340	50 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	50 + 100 %LEL (&)	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
317	50 (246)	50 (246)	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL // 3150 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	45 / 100 %LEL // 3600 ppm Gas-Library	
			IR	Polytron 5700 type 340	100 %LEL Gas-Library	
			EC	Polytron 7000 and P 8100 OV1	as Aald (50 / 100 / 200 ppm)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
318	2-Methyltetrahydrofuran CAS 96-47-9 (CH ₂) ₃ (O)CHCH ₃	2-MeTHF C ₅ H ₁₀ O	Tetrahydro-2-methylfuran Tetrahydrosilvan	86.1 2.97 r 76 v	0.85 1 ppm = 3.59 mg/m ³	80 176 °F	136	-12 10 °F	1.2* (43)		1 mg/m ³ = 0.28 ppm			
319	Methyltrimethoxysilane CAS 1185-55-3 CH ₃ Si(OCH ₃) ₃	MTMS C ₄ H ₁₂ O ₃ Si	Trimethoxymethylsilane	136.2 4.70 r	0.96 1 ppm = 5.68 mg/m ³	102 216 °F	106		1.5* (85)		1 mg/m ³ = 0.18 ppm			
320	Morpholine CAS 110-91-8 (CH ₂) ₄ ONH	C ₄ H ₉ NO	Tetrahydro-1,4-oxazine Diethylene oximide	87.1 3.01 r	1.00 1 ppm = 3.63 mg/m ³	129 264 °F	10.7	31 88 °F	1.8 (65)	1.4 (51)	1.4 (51)	1.4 (51)	1.8 (65)	275 IIA T3
321	Naphthalene CAS 91-20-3 C ₁₀ H ₈	C ₁₀ H ₈	Naphthyl hydride	128.2 4.43 r	1.14 1 ppm = 5.34 mg/m ³	218 424 °F	0.07	77 171 °F	0.6 (32)		0.9 (48)	0.9 (48)	0.9 (48)	540 IIA T1
322	Nitric acid CAS 7697-37-2 HNO ₃	HNO ₃	Hydrogen nitrate	63.0 2.17 r	1.52 1 ppm = 2.63 mg/m ³	84 183 °F	56	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
323	Nitroethane CAS 79-24-3 CH ₃ CH ₂ NO ₂	C ₂ H ₅ NO ₂		75.1 2.59 r	1.05 1 ppm = 3.13 mg/m ³	115 239 °F	20.8	28 82 °F		3.4 (106)	3.4 (106)	3.4 (106)	3.4 (106)	410 IIB T2
324	Nitrogen dioxide CAS 10102-44-0 NO ₂	NTO NO ₂	Nitrogen peroxide Nitrogen tetroxide	46.0 1.59 r	1.44 1 ppm = 1.92 mg/m ³	21 70 °F	1000	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
325	Nitrogen monoxide CAS 10102-43-9 NO	NO	Nitric oxide	30.0 1.04 r	Gas 1 ppm = 1.25 mg/m ³	-152 -242 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
326	2-Nitropropane CAS 79-46-9 (CH ₃) ₂ CHNO ₂	2-NP C ₃ H ₇ NO ₂	Nitro-i-propane Dimethylnitromethane	89.1 3.08 r 124 v	0.99 1 ppm = 3.71 mg/m ³	120 248 °F	17	26 79 °F	2.2 (82)		2.6 (97)	2.6 (97)		425 IIB T2
327	n-Nonane CAS 111-84-2 C ₉ H ₂₀	C ₉ H ₂₀		128.3 4.43 r	0.72 1 ppm = 5.35 mg/m ³	151 304 °F	4.8	31 88 °F	0.7 (37)	0.7 (37)	0.8 (43)	0.8 (43)	0.7 (37)	205 IIA T3
328	5-Nonanone CAS 502-56-7 (C ₄ H ₉) ₂ CO	C ₉ H ₁₈ O	Nonan-5-on Dibutyl ketone Valerone	142.2 4.91 r	0.82 1 ppm = 5.93 mg/m ³	188 370 °F	0.4	65 149 °F	0.8 (47)		1 mg/m ³ = 0.17 ppm			330 T2
329	2,5-Norbornadiene CAS 121-46-0 CH ₂ ((CH=CH)CH) ₂	BCHD C ₇ H ₈	Norborna-2,5-diene Bicycloheptadiene Bicyclo(2.2.1)hepta-2,5-diene	92.1 3.18 r 63 v	0.91 1 ppm = 3.84 mg/m ³	90 194 °F	69	-11 12 °F	1.0 (38)		1 mg/m ³ = 0.26 ppm			350 T2
330	1,7-Octadiene CAS 3710-30-3 H ₂ C=CH(CH ₂) ₄ CH=CH ₂	C ₈ H ₁₄	Octa-1,7-diene	110.2 3.80 r 73 v	0.75 1 ppm = 4.59 mg/m ³	117 243 °F	20		0.8 (37)		1 mg/m ³ = 0.22 ppm			230 IIB T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
318			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
319			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
320	10 (36)	20 (73)	IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	S = 0.25 (L)
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	as NH3 x 4 (50 / 100 ppm x 4)	
321	0.1 (0.53)	10 (53)	IR	PIR 7000 type 334, P 8700 type 334	55 / 100 %LEL	
			IR	Polytron 5700 type 334	100 %LEL	
322	1 (2.6)	2 (5.3)	EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
323	100 (313)	100 (313)	IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
324	0.5 (0.96)	5c (9.6)	EC	Polytron 7000 and P 8100 NO2	NO2: 5 / 10 / 100 ppm / LDL = 0.3 ppm	
			EC	Polytron 7000 and P 8100 NO2 LC	NO2: 1 / 5 / 20 ppm / LDL = 0.05 ppm	
			EC	Polytron 5100 NO2	5 + 10 + 20 + 30 + 50 + 100 ppm	
			EC	Polytron 5100 NO2 LC	1 + 3 + 5 + 10 + 20 ppm	
			EC	Polytron 3000 NO2	10 ppm	
325	2 (2.5)	25 (31)	EC	Polytron 7000 and P 8100 NO	NO: 30 / 50 / 200 ppm / LDL = 3 ppm	
			EC	Polytron 5100 NO	30 + 50 + 100 + 200 ppm	
			EC	Polytron 3000 NO	50 ppm	
326	0.5T (1.9)	25 (93)	IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (\$)	
			IR	Polytron 5700 type 334	100 %LEL (\$)	
327		200 (1069)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD performance approved performance approved performance approved performance approved performance approved
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 1750 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 350 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
328			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
329			IR	PIR 7000 type 334, P 8700 type 334	100 %LEL (?)	
			IR	Polytron 5700 type 334	100 %LEL (?)	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
330			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
331	Octamethyl cyclotetrasiloxane CAS 556-67-2 (CH ₃) ₈ Si ₄ O ₄	OMCTS C ₈ H ₂₄ O ₄ Si ₄	DC244 Fluid	296.6 10.24 r	0.95	175 347 °F	0.9	51 124 °F	0.75* (93)		1 mg/m ³ = 0.08 ppm			400 IIB T2
332	Octamethyl trisiloxane CAS 107-51-7 ((CH ₃) ₃ SiO) ₂ Si(CH ₃) ₂	OMTSO C ₈ H ₂₄ O ₂ Si ₃		236.5 8.16 r	0.82	152 306 °F	5		0.9* (89)		1 mg/m ³ = 0.10 ppm			
333	n-Octane CAS 111-65-9 C ₈ H ₁₈	C ₈ H ₁₈		114.2 3.94 r 81 v	0.70	126 259 °F	14	12 54 °F	0.8 (38)	0.8 (38)	1.0 (48)	1.0 (48)	0.8 (38)	205 IIA T3
334	1-Octene CAS 111-66-0 CH ₂ =CHC ₆ H ₁₃	C ₈ H ₁₆	1-Octylene 1-Caprylene	112.2 3.87 r 69 v	0.71	121 250 °F	23	21 70 °F	0.7 (33)		1 mg/m ³ = 0.21 ppm			240 T3
335	Oxygen CAS 7782-44-7 O ₂	O ₂	R732	32.0 1.10 r	Gas	-183 -297 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
336	Ozone CAS 10028-15-6 O ₃	O ₃		48.0 1.66 r	Gas	-112 -170 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
337	Paraldehyde CAS 123-63-7 (CH ₃ CHO) ₃	PCHO C ₆ H ₁₂ O ₃	Paracetaldehyde 2.4.6-Trimethyl-1.3.5-trioxane p-Acetyldehyde	132.2 4.56 r 108 v	0.99	124 255 °F	10	27 81 °F	1.3 (72)	1.3 (72)		1.3 (72)		235 IIA T3
338	1,3-Pentadiene trans CAS 2004-70-8 CH ₂ =CHCH=CHCH ₃	C ₅ H ₈	Penta-1,3-diene trans Piperylene Piperylene trans (E)-1,3-Penadiene 1-Methylbutadiene trans	68.1 2.35 r 76 v	0.67	42 108 °F	452	<-30 <-22 °F	1.2 (34)		1 mg/m ³ = 0.35 ppm		1.2 (34)	
339	1,1,1,3,3-Pentafluoro butane CAS 406-58-6 CF ₃ CH ₂ CF ₂ CH ₃	C ₄ H ₅ F ₅	HFC 365mfc R365	148.1 5.11 r 281 v	1.25	40 104 °F	433	<-27 <-17 °F	3.8 (234)		1 mg/m ³ = 0.16 ppm			590 T1
340	Pentafluoropropane CAS 460-73-1 CF ₃ CH ₂ CHF ₂	C ₃ H ₃ F ₅	1,1,1,3,3-Pentafluoropropane R245fa	134.1 4.63 r	Gas	15.3 60 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
341	2,2,4,6,6-Pentamethylheptane CAS 13475-82-6 ((CH ₃) ₃ CCH ₂) ₂ CHCH ₃	iC12 C ₁₂ H ₂₆	i-Dodecane Isododecane	170.3 5.88 r	0.75	180 356 °F	1	43 109 °F	0.5 (35)		1 mg/m ³ = 0.14 ppm			430 IIA T2
342	n-Pentane CAS 109-66-0 C ₅ H ₁₂	C ₅ H ₁₂	Amyl hydride	72.2 2.49 r 79 v	0.63	36 97 °F	562	<-20 <-4 °F	1.1 (33)	1.1 (33)	1.5 (45)	1.5 (45)	1.4 (42)	260 IIA T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
331			IR	PIR 7000 type 334, P 8700 type 334	40 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
332			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
333	500 (2379)	500 (2379)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD performance approved performance approved performance approved performance approved performance approved
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2000 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 400 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
334			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
335			EC	Polytron 7000 and P 8100 O2	5 / 25 / 100 vol% / LDL = 0.5 vol%	
			EC	Polytron 7000 and P 8100 O2 LS	5 / 10 / 25 vol% / LDL = 0.5 vol%	
			EC	Polytron 5100 O2	5 + 10 + 20 + 25 + 50 + 100 vol%	
			EC	Polytron 5100 O2 LS	5 + 10 + 20 + 25 vol%	
			EC	Polytron 3000 O2	5 or 25 or 100 vol%	
			EC	Polytron 3000 O2 LS	25 vol%	
			EC	Polytron 2000 O2	25 vol%	
336		0.1 (0.20)	EC	Polytron 7000 and P 8100 Ozone	O3: 0.5 / 1 / 5 ppm / LDL = 0.02 ppm	
			EC	Polytron 3000 Ozone	0.5 ppm	
337			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	
338			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
339			IR	PIR 7000 type 334, P 8700 type 334	45 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	90 / 100 %LEL (&)	
			IR	Polytron 5700 type 340	100 %LEL (&)	
340			IR	PIR 7000 type 334, P 8700 type 334	1.7 / 3.0 vol%	
			IR	Polytron 5700 type 334	2.0 vol%	
			IR	PIR 7000 type 340, P 8700 type 340	2.4 / 3.0 vol%	
341			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 1250 ppm Gas-Library	performance approved performance approved performance approved performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 500 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
342	1000 (3008)	1000 (3008)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD performance approved performance approved performance approved performance approved performance approved CSF = 0.79 (Propane = 1.00) / LEL = 1.1
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2750 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 700 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
343	Pentanoic acid CAS 109-52-4 CH ₃ (CH ₂) ₃ COOH	C ₅ H ₁₀ O ₂	Valeric acid Butyl carbonic acid	102.1 3.52 r	0.94	186 367 °F	0.2	87 189 °F	1.6 (68)			1.6 (68)		375 IIA T2
344	3-Pentanol CAS 584-02-1 C ₂ H ₅ CH(OH)C ₂ H ₅	C ₅ H ₁₂ O	Pentan-3-ol 3-Amyl alcohol Diethyl carbinol 1-Ethyl-1-propanol	88.2 3.04 r	0.82	116 241 °F	7.6	30 86 °F	1.2 (44)			1.2 (44)		360 IIA T2
345	1-Pentene CAS 109-67-1 C ₃ H ₇ CH=CH ₂	C ₅ H ₁₀	n-Amylene n-Pentylene Propylethylene	70.1 2.42 r 96 v	0.64	30 86 °F	704	<-20 <-4 °F	1.4 (41)			1.5 (44)		280 T3
346	Phosgene CAS 75-44-5 COCl ₂	CG CCl ₂ O	Carbonyl chloride Carbon oxychloride Chloroformyl chloride	98.9 3.41 r	Gas	8 46 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
347	Phosphine CAS 7803-51-2 PH ₃	H ₃ P	Hydrogen phosphide Phosphorus hydride Phosphorus trihydride	34.0 1.17 r	Gas	-88 -126 °F	Gas		1.6 (23)			1.6 (23)		
348	Phosphorus oxychloride CAS 10025-87-3 POCl ₃	POCL Cl ₃ OP	Phosphorus chloride Phosphorus oxytrichloride Phosphoryl chloride Trichlorophosphorus oxide Trichlorophosphine oxide	153.3 5.29 r	1.68	105 221 °F	36	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
349	Phosphorus trichloride CAS 7719-12-2 PCl ₃	Cl ₃ P	Phosphorus chloride Trichlorophosphine	137.3 4.74 r	1.57	76 169 °F	127	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
350	α-Pinene CAS 80-56-8 C ₁₀ H ₁₆	C ₁₀ H ₁₆	2.6.6-Trimethylbicyclo(3.1.1)hept-2-ene 2-Pinene	136.2 4.70 r	0.86	155 311 °F	5	33 91 °F	0.8* (45)			1 mg/m ³ = 0.18 ppm		255 T3
351	Piperidine CAS 110-89-4 (CH ₂) ₅ NH	PIP C ₅ H ₁₁ N	Hexahydropyridine Pentamethylene imine Azacyclohexane	85.2 2.94 r 80 v	0.86	106 223 °F	33	4 39 °F	1.3 (46)			1 mg/m ³ = 0.28 ppm		IIA
352	Propane CAS 74-98-6 C ₃ H ₈	C ₃ H ₈	Dimethyl methane Propyl hydride R290	44.1 1.52 r	Gas	-42 -44 °F	Gas	Gas	1.7 (31)	1.7 (31)	2.1 (39)	2.1 (39)	1.7 (31)	470 IIA T1
353	i-Propanol CAS 67-63-0 (CH ₃) ₂ CHOH	IPA C ₃ H ₈ O	Isopropanol i-Propyl alcohol Isopropyl alcohol 2-Propanol Propan-2-ol Dimethyl carbinol	60.1 2.07 r 96 v	0.78	82 180 °F	43	12 54 °F	2.0 (50)	2.0 (50)	2.0 (50)	2.0 (50)	2.0 (50)	425 IIA T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
343			IR	PIR 7000 type 334, P 8700 type 334	25 / 25 %LEL (&)	only for concentrations < 25 %LEL
			IR	PIR 7000 type 340, P 8700 type 340	25 / 25 %LEL (&)	only for concentrations < 25 %LEL
344	20 (74)		CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (\$)	
			IR	Polytron 5700 type 340	100 %LEL (\$)	
345			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 2800 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 1400 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (!)	
346	0.1 (0.41)	0.1 (0.41)	EC	Polytron 7000 and P 8100 COCl ₂	Phsg: 0.1 / 1 / 20 ppm / LDL = 0.05 ppm	
			EC	Polytron 5100 COCl ₂	0.1 + 0.3 + 0.5 + 1 + 3 + 5 + 10 + 20 ppm	
347	0.1 (0.14)	0.3 (0.43)	EC	Polytron 7000 and P 8100 PH ₃ /AsH ₃	PH ₃ : 0.3 / 1 / 20 ppm / LDL = 0.02 ppm	S = 1.0
			EC	Polytron 7000 and P 8100 Hydrides	PH ₃ : 0.3 / 1 / 20 ppm / LDL = 0.03 ppm	S = 1.0
			EC	Polytron 7000 and P 8100 Hydrides SC	PH ₃ : 0.3 / 1 / 1 ppm / LDL = 0.01 ppm	S = 1.0
			EC	Polytron 5100 Hydrides	PH ₃ : 0.3 + 0.5 + 1 + 3 + 5 + 10 + 20 ppm	
			EC	Polytron 3000 PH ₃	0.3 or 1 or 10 ppm	
348	0.02 (0.13)	0.1 (0.64)	EC	Polytron 7000 and P 8100 AC	POC: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and P 8100 HCl	POC: 20 / 30 / 100 ppm / LDL = 1.5 ppm	S = 0.9
349	0.1 (0.57)	0.5 (2.9)	EC	Polytron 7000 and P 8100 AC	PCI ₃ : 3 / 10 / 30 ppm / LDL = 0.5 ppm	
			EC	Polytron 7000 and P 8100 HCl	PCI ₃ : 5 / 10 / 20 ppm / LDL = 0.2 ppm	S = 3.0
350			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
351			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
352	1000 (1837)	1000 (1837)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 3400 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 850 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			IR	GasSecure GS01	100 %LEL	min. conc. for ultrasonic sensor: 1700 ppm
			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	CSF = 1.00 (Propane = 1.00) / LEL = 1.7
353	200 (501)	400 (1002)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 4000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL // 2000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved
			EC	Polytron 7000 and P 8100 OV1	IPA: 100 / 200 / 300 ppm / LDL = 10 ppm	S = 0.3

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
354	n-Propanol CAS 71-23-8 C ₃ H ₇ OH	NPA C ₃ H ₈ O	n-Propyl alcohol 1-Propanol Ethyl carbinol	60.1 2.07 r 98 v	0.80 1 ppm = 2.50 mg/m ³	97 207 °F	20	22 72 °F	2.1 (53)	2.1 (53)	2.2 (55)	2.2 (55)	2.2 (55)	385 IIB T2
355	Propargyl alcohol CAS 107-19-7 HCCCH ₂ OH	C ₃ H ₄ O	2-Propyn-1-ol Prop-2-yn-1-ol Ethylnyl carbinol 2-Propynyl alcohol	56.1 1.94 r	0.95 1 ppm = 2.34 mg/m ³	115 239 °F	10	33 91 °F	2.8 (65)	2.4 (56)			2.4 (56)	365 IIB T2
356	i-Propenyl acetate CAS 108-22-5 CH ₃ COOC(CH ₃)=CH ₂	C ₆ H ₈ O ₂	1-Methylvinyl acetate 1-Propen-2-ol acetate Acetic acid i-propenyl ester Isopropenyl acetate	100.1 3.46 r 110 v	0.91 1 ppm = 4.17 mg/m ³	97 207 °F	23	4 39 °F	1.6 (67)		1 mg/m ³ = 0.24 ppm			395 IIA T2
357	Propionaldehyde CAS 123-38-6 C ₂ H ₅ CHO	C ₃ H ₆ O	Propionic aldehyde Propanal Propyl aldehyde Methylacetaldehyde	58.1 2.01 r 104 v	0.80 1 ppm = 2.42 mg/m ³	49 120 °F	341	<-20 <-4 °F	2.3 (56)	2.0 (48)		2.6 (63)	2.0 (48)	190 IIB T4
358	Propionic acid CAS 79-09-4 C ₂ H ₅ COOH	C ₃ H ₆ O ₂	Propanoic acid Methylacetic acid Carboxyethane Ethylformic acid Ethanecarboxylic acid	74.1 2.56 r	0.99 1 ppm = 3.09 mg/m ³	141 286 °F	3.5	52 126 °F	2.9 (90)	2.1 (65)		2.9 (90)	3.1 (96)	485 IIA T1
359	Propionic acid anhydride CAS 123-62-6 (C ₂ H ₅ CO) ₂ O	C ₆ H ₁₀ O ₃	Propionic anhydride Propanoic acid anhydride Propanoic anhydride Methylacetic anhydride	130.1 4.49 r	1.02 1 ppm = 5.42 mg/m ³	167 333 °F	1.4	74 165 °F				1.3 (70)		315 T2
360	2-Propoxyethanol CAS 2807-30-9 C ₃ H ₇ OCH ₂ CH ₂ OH	EGnPE C ₆ H ₁₂ O ₂	Ethylene glycol monopropyl ether Propylglycol Propyl cellosolve	104.2 3.60 r	0.91 1 ppm = 4.34 mg/m ³	150 302 °F	1.7	51 124 °F	1.45 (63)		1 mg/m ³ = 0.23 ppm			230 IIB T3
361	i-Propoxyethanol CAS 109-59-1 (CH ₃) ₂ CHOC ₂ H ₄ OH	EGiPE C ₆ H ₁₂ O ₂	Ethylene glycol i-propyl ether i-Propyl glycol Isopropoxyethanol Isopropyl glycol Isopropyl oxitol 4-Methyl-3-oxa-1-pentanol	104.2 3.60 r	0.90 1 ppm = 4.34 mg/m ³	142 288 °F	3.5	43 109 °F	1.4 (61)		1 mg/m ³ = 0.23 ppm			IIB
362	1-Propoxy-2-propanol CAS 1569-01-3 C ₃ H ₇ OCH ₂ CH(OH)CH ₃	PnPGE C ₆ H ₁₄ O ₂	1-Propoxypropan-2-ol Propylene glycol propyl ether 2-Propoxy-1-methyl ethanol	118.2 4.08 r	0.89 1 ppm = 4.93 mg/m ³	150 302 °F	2.27	48 118 °F	1.2 (59)		1 mg/m ³ = 0.20 ppm			
363	i-Propyl acetate CAS 108-21-4 CH ₃ COOCH(CH ₃) ₂	C ₆ H ₁₀ O ₂	Isopropyl acetate Acetic acid i-propyl ester Acetic acid 1-methylethyl ester 2-Acetoxypropane 2-Propyl acetate	102.1 3.52 r 130 v	0.88 1 ppm = 4.25 mg/m ³	89 192 °F	62	2 36 °F	1.8 (77)	1.7 (72)	1.8 (77)	1.8 (77)	1.8 (77)	425 IIA T2
364	n-Propyl acetate CAS 109-60-4 CH ₃ COOC ₃ H ₇	C ₆ H ₁₀ O ₂	Acetic acid propyl ester Ethanoic acid propyl ester 1-Acetoxypropane	102.1 3.52 r 122 v	0.89 1 ppm = 4.25 mg/m ³	102 216 °F	33	10 50 °F	1.7 (72)	1.7 (72)	1.7 (72)	1.7 (72)	1.7 (72)	455 IIA T1

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
354		200 (501)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 3150 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL // 1050 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	as EtOH (100 / 200 / 300 ppm)	S = 0.85 (L)
355	2 (4.7)	1 (2.3)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	
356	10 (42)		IR	PIR 7000 type 334, P 8700 type 334	50 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	45 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
357			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL // 6900 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL // 3450 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
358	10 (31)	10 (31)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (\$)	
359			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	35 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
360	20 (87)		IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	5 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
361	5 (22)		IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
362			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
363		250 (1064)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
364		200 (851)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
365	i-Propylamine CAS 75-31-0 (CH ₃) ₂ CHNH ₂	C ₃ H ₉ N	2-Aminopropane 2-Propylamine 2-Propanamine Isopropylamine	59.1 2.04 r 107 v	0.69	32 90 °F	633	<-20 <-4 °F	2.0 (49)	2.3 (57)		2.3 (57)	2.3 (57)	400 IIA T2
366	n-Propylamine CAS 107-10-8 C ₃ H ₇ NH ₂	C ₃ H ₉ N	1-Aminopropane 1-Propylamine 1-Propanamine	59.1 2.04 r 102 v	0.72	49 120 °F	339	<-20 <-4 °F	2.0 (49)	2.0 (49)		2.0 (49)	2.0 (49)	320 IIA T2
367	n-Propylbenzene CAS 103-65-1 C ₆ H ₅ C ₃ H ₇	C ₉ H ₁₂	1-Phenylpropane	120.2 4.15 r	0.86	159 318 °F	3.5	39 102 °F	0.8 (40)			0.8 (40)		450 IIA T2
368	i-Propyl chloride CAS 75-29-6 (CH ₃) ₂ CHCl	IPC C ₃ H ₇ Cl	2-Chloropropane Isopropyl chloride	78.5 2.71 r 159 v	0.86	35 95 °F	567	<-20 <-4 °F	2.8 (92)	2.8 (92)		2.8 (92)	2.8 (92)	590 IIA T1
369	n-Propylchloride CAS 540-54-5 C ₃ H ₇ Cl	C ₃ H ₇ Cl	1-Chloropropane R280	78.5 2.71 r 143 v	0.89	47 117 °F	373	<-20 <-4 °F	2.6 (85)	2.4 (79)		2.6 (85)	2.4 (79)	520 IIA T1
370	i-Propylcyclohexane CAS 696-29-7 C ₆ H ₁₁ CH(CH ₃) ₂	C ₉ H ₁₈	Isopropylcyclohexane 2-Cyclohexylpropane (Methylethyl)cyclohexane Hexahydrocumene	126.4 4.36 r	0.80	155 311 °F								1 mg/m ³ = 0.19 ppm
371	Propylene CAS 115-07-1 CH ₂ =CHCH ₃	C ₃ H ₆	Propene Methylethylene Methylethene R1270	42.1 1.45 r	Gas	-48 -54 °F	Gas	Gas	2.0 (35)	2.0 (35)		2.0 (35)	2.0 (35)	485 IIA T1
372	1,2-Propylenediamine CAS 78-90-0 CH ₃ CH(NH ₂)CH ₂ NH ₂	PDA C ₃ H ₁₀ N ₂	1,2-Diaminopropane Propane-1,2-diamine	74.1 2.56 r	0.87	119 246 °F	4	33 91 °F	2.2* (68)					1 mg/m ³ = 0.32 ppm
373	Propylene oxide CAS 75-56-9 CH ₃ CHCH ₂ O	PO C ₃ H ₆ O	1,2-Epoxy propane 1,2-Propene oxide Methyloxirane Methyl ethylene oxide	58.1 2.01 r 83 v	0.83	34 93 °F	588	<-20 <-4 °F	1.9 (46)	1.9 (46)	2.3 (56)	2.3 (56)	1.9 (46)	430 IIB T2
374	n-Propylformate CAS 110-74-7 HCOOC ₃ H ₇	C ₄ H ₈ O ₂	Formic acid propylester Methanoic acid propylester	88.1 3.04 r 133 v	0.91	81 178 °F	84	-3 27 °F	2.2 (81)					1 mg/m ³ = 0.27 ppm
375	i-Propyl mercaptan CAS 75-33-2 (CH ₃) ₂ CHSH	iPM C ₃ H ₈ S	2-Propanethiol 2-Propyl mercaptan Isopropyl mercaptan	76.2 2.63 r 104 v	0.82	53 127 °F	300	-20 -4 °F	1.8 (57)					1 mg/m ³ = 0.31 ppm

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
365	5 (12)	5 (12)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 NH3 LC	i-PA: 100 / 200 ppm / LDL = 10 ppm	
366			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
367			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	25 / 100 %LEL // 2000 ppm Gas-Library	
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 1200 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
368			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
369			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	corrosive/sensor poison
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
370			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
371			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD performance approved performance approved performance approved performance approved performance approved min. conc. for ultrasonic sensor: 2000 ppm S = 0.7 CSF = 0.83 (Propane = 1.00) / LEL = 2.0
			IR	PIR 7000 type 334, P 8700 type 334	20 / 100 %LEL // 4000 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 3000 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			IR	GasSecure GS01	100 %LEL	
			EC	Polytron 7000 and P 8100 OV1	C3H6: 30 / 50 / 100 ppm / LDL = 5 ppm	
372			OP	Polytron Pulsar 2	1 // 4 / 8 LELm	
			IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
373	2 (4.8)	100 (242)	IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved with sensor ... DD performance approved performance approved performance approved performance approved
			CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	
			IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL // 2850 ppm Gas-Library	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL Gas-Library	
			IR	PIR 7000 type 340, P 8700 type 340	15 / 100 %LEL // 2850 ppm Gas-Library	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL Gas-Library	
374			EC	Polytron 7000 and P 8100 OV1	PO: 20 / 50 / 200 ppm / LDL = 5 ppm	S = 0.8
			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
375			EC	Polytron 7000 and P 8100 H2S LC	iPM: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.5

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
376	n-Propyl mercaptan CAS 107-03-9 C ₃ H ₇ SH	nPM C ₃ H ₆ S	1-Propanethiol 1-Propyl mercaptan 1-Mercaptopropane	76.2 2.63 r 102 v	0.84	68 154 °F	165	-15 5 °F	1.8 (57)		1 mg/m ³ = 0.31 ppm			IIA
377	i-Propyl nitrate CAS 1712-64-7 (CH ₃) ₂ CHONO ₂	C ₃ H ₇ NO ₃	Nitric acid i-propylester Nitric acid 1-methylethylester Isopropyl nitrate	105.1 3.63 r	1.04	101 214 °F	36	11 52 °F		2.0 (88)	1 mg/m ³ = 0.23 ppm		2.0 (88)	175 IIB T4
378	Propyne CAS 74-99-7 CH ₃ CCH	C ₃ H ₄	Methyl acetylene Allylene 1-Propyne Propine	40.1 1.38 r	Gas	-23 -9 °F	Gas		1.8 (30)	1.7 (28)	1.7 (28)	1.7 (28)	1.7 (28)	340 IIB T2
379	Pyridine CAS 110-86-1 C ₅ H ₅ N	C ₅ H ₅ N	Azine Azabenzene	79.1 2.73 r 86 v	0.98	115 239 °F	20	17 63 °F	1.7 (56)	1.7 (56)	1.8 (59)	1.8 (59)	1.7 (56)	550 IIA T1
380	Silane CAS 7803-62-5 SiH ₄	H ₄ Si	Monosilane Silicon tetrahydride Silicane Silicon hydride	32.1 1.11 r	Gas	-112 -170 °F	Gas						1.4 (19)	
381	Silicon tetrachloride CAS 10026-04-7 SiCl ₄	Cl ₄ Si	Tetrachlorosilane	169.9 5.86 r	1.48	57 135 °F	260	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
382	Silicon tetrafluoride CAS 7783-61-1 SiF ₄	F ₄ Si	Tetrafluorosilane	104.1 3.59 r	Gas	-65 -85 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
383	Styrene CAS 100-42-5 C ₆ H ₅ CH=CH ₂	C ₈ H ₈	Styrol Vinyl benzene Ethenyl benzene Phenylethylene Cinnamene	104.2 3.60 r	0.91	145 293 °F	7	32 90 °F	1.0 (43)	1.0 (43)	0.9 (39)	0.9 (39)	1.1 (48)	490 IIA T1
384	Sulfur dioxide CAS 7446-09-5 SO ₂	O ₂ S	Sulfurous oxide R764	64.1 2.21 r	Gas	-10 14 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
385	Terpineol CAS 8000-41-7 (CH ₃) ₂ C(OH)C ₆ H ₈ CH ₃	C ₁₀ H ₁₆ O	2(4-Methylcyclohex-3-ene-1-yl)propan-2-ol 4-Menth-1-ene-8-ol 1-Methyl-4-isopropyl-1-cyclohexene-8-ol	154.3 5.33 r	0.93	215 419 °F	0.24		0.53* (34)		1 mg/m ³ = 0.16 ppm			
386	Tetraethyl orthosilicate CAS 78-10-4 (C ₂ H ₅ O) ₄ Si	TEOS C ₈ H ₂₀ O ₄ Si	Tetraethoxysilane Silicic acid tetraethylester Tetraethyl silicate Ethyl silicate Ethyl orthosilicate	208.3 7.19 r	0.93	169 336 °F	9.2	37 99 °F	0.8 (69)	0.45 (39)		1.3 (113)		230 IIB T3
387	1.1.1.2-Tetrafluoro ethane CAS 811-97-2 CF ₃ CH ₂ F	C ₂ H ₂ F ₄	Norflurane R134a	102.0 3.52 r	Gas	-26 -15 °F	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
388	1.3.3.3-Tetrafluoroprop-1-ene trans CAS 1645-83-6 CF ₃ CH=CHF	C ₃ H ₂ F ₄	HFO-1234ze HFC-1234ze R1234ze	114.0 3.94 r	Gas	-19 -2 °F	Gas		6.2* (295)		1 mg/m ³ = 0.21 ppm			
389	Tetrahydro benzaldehyde CAS 100-50-5 C ₆ H ₉ CHO	THB C ₇ H ₁₀ O	1.2.3.6-Tetrahydrobenzaldehyde 3-Cyclohexene-1-aldehyde 3-Cyclohexene-1-carbaldehyde 4-Formyl-1-cyclohexene	110.2 3.80 r	0.97	164 327 °F	2.1	47 117 °F	1.1* (51)		1 mg/m ³ = 0.22 ppm			
390	Tetrahydrofuran CAS 109-99-9 (CH ₂) ₄ O	THF C ₄ H ₈ O	Diethylene monoxide Tetramethylene oxide 1.4-Epoxybutane	72.1 2.49 r 76 v	0.89	64 147 °F	173	-20 -4 °F	1.5 (45)	1.5 (45)	2.0 (60)	2.0 (60)	1.5 (45)	230 IIB T3

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
376		0.5c (1.6)	EC	Polytron 7000 and P 8100 H2S LC	nPM: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.3
377			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
378		1000 (1671)	CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
379		5 (16)	CT IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 3000, P 5310, P 8310	10 // 100 %LEL 25 / 100 %LEL 50 + 100 %LEL 100 %LEL (?)	
380		5 (6.7)	EC EC EC	Polytron 7000 and P 8100 Hydrides Polytron 7000 and P 8100 Hydrides SC Polytron 3000 PH3	SiH4: 5 / 5 / 50 ppm / LDL = 0.05 ppm SiH4: 1 / 5 / 20 ppm / LDL = 0.05 ppm 0.3 or 1 or 10 ppm	S = 0.95 S = 0.65
381			EC EC EC	Polytron 7000 and P 8100 AC Polytron 7000 and P 8100 HCl Polytron 3000 AC	TeCS: 3 / 10 / 30 ppm / LDL = 0.5 ppm TeCS: 5 / 10 / 20 ppm / LDL = 0.2 ppm 3 or 10 ppm	S = 5.0
382			EC EC	Polytron 7000 and P 8100 AC Polytron 3000 AC	SiF4: 3 / 10 / 30 ppm / LDL = 0.5 ppm 3 or 10 ppm	
383	20 (87)	100 (434)	CT IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV2	10 // 100 %LEL 40 / 100 %LEL // 3500 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL Styr: 20 / 50 / 100 ppm / LDL = 5 ppm	polymerizing/sensor poison performance approved performance approved S = 0.5
384	1 (2.7)	5 (13)	EC EC EC	Polytron 7000 and P 8100 SO2 Polytron 5100 SO2 Polytron 3000 SO2	SO2: 5 / 10 / 100 ppm / LDL = 0.5 ppm 5 + 10 + 20 + 30 + 50 + 100 ppm 10 ppm	
385			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	70 / 100 %LEL 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL	
386	1.4 (12)	100 (868)	IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	25 / 100 %LEL 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
387	1000 (4250)		IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	1.5 / 10.0 vol% // 15000 ppm Gas-Library 2.0 + 5.0 + 10.0 vol% Gas-Library 2.0 / 10.0 vol% // 20000 ppm Gas-Library 2.0 + 5.0 + 10.0 vol% Gas-Library	
388			IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334	100 / 100 %LEL (&) 100 %LEL (&)	
389			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	60 / 100 %LEL 100 %LEL 25 / 100 %LEL 50 + 100 %LEL	
390	50 (150)	200 (601)	CT IR IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	10 // 100 %LEL 15 / 100 %LEL // 2250 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 5 / 100 %LEL // 750 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL THF: 30 / 50 / 200 ppm / LDL = 5 ppm	S = 0.75

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
391	Tetrahydronaphthalene CAS 119-64-2 C ₁₀ H ₁₂	C ₁₀ H ₁₂	1,2,3,4-Tetrahydronaphthalene Tetralin	132.2 4.56 r	0.97	208 406 °F	0.24	71 160 °F	0.8 (44)			0.8 (44)		390 T2
392	Tetrahydropyran CAS 142-68-7 (CH ₂) ₅ O	THP C ₆ H ₁₀ O	Tetrahydro-2H-pyran Pentamethylene oxide Oxacyclohexane Oxane	86.1 2.97 r	0.88	88 190 °F	95.3	-20 -4 °F	1.1* (39)		1 mg/m ³ = 0.28 ppm			
393	Tetrahydrothiophene CAS 110-01-0 C ₄ H ₆ S	THT C ₄ H ₆ S	Tetramethylene sulfide Thiocyclopentane Thiophane	88.2 3.04 r 61 v	1.00	121 250 °F	19	13 55 °F	1.1 (40)	1.1 (40)			1.1 (40)	200 IIA T4
394	Tetrakisdimethylaminotitanium CAS 3275-24-9 ((CH ₃) ₂ N) ₄ Ti	TDMAT C ₈ H ₂₄ N ₄ Ti	Titanium tetrakis(dimethylammonium) Titanium dimethylamide	224.2 7.74 r	0.95	n. a. 32 °F	0.1		0.15* (14)		1 mg/m ³ = 0.11 ppm			
395	1,2,3,5-Tetramethylbenzene CAS 527-53-7 C ₆ H ₂ (CH ₃) ₄	TeMB C ₁₀ H ₁₄	1,3,4,5-Tetramethylbenzene Isodurene	134.2 4.63 r	0.89	198 388 °F			0.7** (39)		1 mg/m ³ = 0.18 ppm			
396	1,1,3,3-Tetramethyldisiloxane CAS 3277-26-7 (CH ₃ SiHCH ₃) ₂ O	TMDSO C ₄ H ₁₄ OSi ₂	2,4-Dimethyl-3-oxa-2,4-disilapentane	134.3 4.64 r	0.76	71 160 °F	150	<-20 <-4 °F	0.8* (45)		1 mg/m ³ = 0.18 ppm			240 IIB T3
397	Tetramethyldivinyl disilazane CAS 7691-02-3 (CH ₂ =CH-Si(CH ₃) ₂) ₂ NH	DVTMDS C ₈ H ₁₈ NSi ₂	1,1,3,3-Tetramethyl-1,3-divinylsilazane 1,3-Divinyltetramethyldisilazane 1,3-Divinyl-1,1,3,3-tetramethyldisilazane	185.4 6.40 r	0.82	160 320 °F	14		0.8* (62)		1 mg/m ³ = 0.13 ppm			
398	Tetramethyl ethylene diamine CAS 110-18-9 (CH ₃) ₂ NC ₂ H ₄ N(CH ₃) ₂	TEMED C ₆ H ₁₆ N ₂	1,2-Bis-(dimethyl amino)-ethane	116.2 4.01 r 94 v	0.77	120 248 °F	13.3	19 66 °F	1.0 (48)		1 mg/m ³ = 0.21 ppm			145 IIA T4
399	Tetramethyl orthosilicate CAS 681-84-5 (CH ₃ O) ₄ Si	TMOS C ₄ H ₁₂ O ₄ Si	Tetramethoxy silane Silicic acid tetramethylester Tetramethyl silicate Methyl silicate Methyl orthosilicate	152.2 5.25 r	1.02	122 252 °F	18	20 68 °F	0.88* (56)		1 mg/m ³ = 0.16 ppm			
400	2,2,3,3-Tetramethylpentane CAS 7154-79-2 C ₂ H ₅ C(CH ₃) ₂ C(CH ₃) ₃	C ₉ H ₂₀	i-Nonane Isononane	128.3 4.43 r 84 v	0.76	140 284 °F		25 77 °F	0.8 (43)		1 mg/m ³ = 0.19 ppm			430 IIA T2
401	Tetramethylsilane CAS 75-76-3 (CH ₃) ₄ Si	TMS C ₄ H ₁₂ Si	Tetramethyl silicane	88.2 3.04 r 85 v	0.65	26 79 °F	750	<-20 <-4 °F	1.0 (37)		1 mg/m ³ = 0.27 ppm			330 IIB T2
402	Thionyl chloride CAS 7719-09-7 SOCl ₂	Cl ₂ OS	Sulfurous oxychloride Sulfurous dichloride	119.0 4.11 r	1.64	76 169 °F	124	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
403	Tin tetrachloride CAS 7646-78-8 SnCl ₄	Cl ₄ Sn	Tin chloride Stannic chloride	260.5 8.99 r	2.23	114 237 °F	24	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
404	Titanium tetrachloride CAS 7550-45-0 TiCl ₄	Cl ₄ Ti	Titanic chloride	189.7 6.55 r	1.73	136 277 °F	13	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
405	Toluene CAS 108-88-3 C ₆ H ₅ CH ₃	C ₇ H ₈	Toluol Methyl benzene Methyl benzol Phenyl methane	92.1 3.18 r 66 v	0.87	111 232 °F	29	6 43 °F	1.0 (38)	1.0 (38)	1.1 (42)	1.1 (42)	1.1 (42)	535 IIA T1

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
391			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
392			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
393	50 (184)		IR	PIR 7000 type 334, P 8700 type 334	35 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL	
			EC	Polytron 7000 and P 8100 H2S LC	THT: 20 / 50 / 100 ppm / LDL = 1 ppm	S = 0.3
394			EC	Polytron 7000 and P 8100 NH3 LC	TDMATI: 100 ppm / LDL = 5 ppm	
395			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	20 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
396			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
			EC	Polytron 7000 and P 8100 OV1	as IPA (100 / 200 / 300 ppm)	S = 0.4 (L)
397			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL	
			IR	Polytron 5700 type 334	50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	25 / 100 %LEL	
			IR	Polytron 5700 type 340	50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
398			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
399	0.3 (1.9)	1 (6.3)	IR	PIR 7000 type 334, P 8700 type 334	15 / 100 %LEL	
			IR	Polytron 5700 type 334	20 + 50 + 100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	10 / 100 %LEL	
			IR	Polytron 5700 type 340	20 + 50 + 100 %LEL	
			IR	PIR 3000, P 5310, P 8310	100 %LEL (?)	
400			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
401			IR	PIR 7000 type 340, P 8700 type 340	100 %LEL (?)	
			IR	Polytron 5700 type 340	100 %LEL (?)	
402		1c (5.0)	EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	S = 4.0
			EC	Polytron 7000 and P 8100 HCl	SOC: 5 / 10 / 20 ppm / LDL = 0.2 ppm	
403			EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	S = 3.0
			EC	Polytron 7000 and P 8100 HCl	TTC: 5 / 10 / 20 ppm / LDL = 0.5 ppm	
404			EC	Polytron 7000 and P 8100 AC	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm	S = 5.0
			EC	Polytron 7000 and P 8100 HCl	TiTC: 5 / 10 / 20 ppm / LDL = 0.2 ppm	
405	50 (192)	200 (768)	CT	P 5200, P 8200, PEX 3000, SE Ex	10 // 100 %LEL	performance approved with sensor ... DD
			IR	PIR 7000 type 334, P 8700 type 334	30 / 100 %LEL // 2750 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 334	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 7000 type 340, P 8700 type 340	40 / 100 %LEL // 4000 ppm Gas-Library	performance approved
			IR	Polytron 5700 type 340	50 + 100 %LEL Gas-Library	performance approved
			IR	PIR 3000, P 5310, P 8310	100 %LEL	performance approved

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
406	Tributylamine CAS 102-82-9 (C ₄ H ₉) ₃ N	TBA C ₁₂ H ₂₇ N	N,N-Dibutyl-1-butanamine	185.4 6.40 r	0.78	214 417 °F	0.4	86 187 °F	1.4* (108)		1 mg/m ³ = 0.13 ppm			IIA
407	1.1.1-Trichloroethane CAS 71-55-6 CH ₂ ClCl ₃	C ₂ H ₃ Cl ₃	Methyl chloroform R140a	133.4 4.60 r 590 v	1.34	74 165 °F	133	n. a.	9.5 (528)		7.5 (417)	7.5 (417)		490 IIA T1
408	Trichloro ethene CAS 79-01-6 Cl ₂ C=CHCl	TCE C ₂ HCl ₃	Trichloro ethylene 1.1.2-Trichloroethylene Ethylene trichloride	131.4 4.54 r 444 v	1.46	87 189 °F	77.6		7.9 (433)		8.0 (438)			410 IIA T2
409	1.2.3-Trichloropropane CAS 96-18-4 C ₃ H ₅ Cl ₃	C ₃ H ₅ Cl ₃	Trichlorohydrin Allyl trichloride Glyceryl trichlorohydrin	147.4 5.09 r	1.39	156 313 °F	2.8	74 165 °F	3.2 (197)		3.2 (197)	3.2 (197)		IIA
410	Trichlorosilane CAS 10025-78-2 SiHCl ₃	TCS HCl ₃ Si	Silylchloride Silicochloroform Silicon chloroform	135.5 4.68 r 435 v	1.34	32 90 °F	660	<-20 <-4 °F	6.9 (390)			1.2 (68)		195 IIC T4
411	Triethoxymethane CAS 122-51-0 CH(OC ₂ H ₅) ₃	TEOF C ₇ H ₁₆ O ₃	Triethyl orthoformate Formic acid-o-triethyl ester	148.2 5.12 r 72 v	0.90	146 295 °F	4	30 86 °F	0.7 (43)		1 mg/m ³ = 0.16 ppm			
412	Triethylamine CAS 121-44-8 (C ₂ H ₅) ₃ N	TEA C ₆ H ₁₅ N	N,N-Diethylethanamine	101.2 3.49 r 104 v	0.73	89 192 °F	70	-7 19 °F	1.2 (51)	1.2 (51)	1.2 (51)	1.2 (51)	1.2 (51)	215 IIA T3
413	1.1.1-Trifluoroethane CAS 420-46-2 CF ₃ CH ₃	C ₂ H ₃ F ₃	Methylfluoroform R143a	84.0 2.90 r	Gas	-48 -54 °F	Gas	Gas		6.8 (238)			9.2 (322)	714 IIA T1
414	Trifluoro methoxy benzene CAS 456-55-3 C ₆ H ₅ OCF ₃	TFMB C ₇ H ₅ F ₃ O	Trifluoroanisene Phenyl trifluoromethyl ether	162.1 5.60 r	1.23	102 216 °F			2.0* (135)		1 mg/m ³ = 0.15 ppm			
415	Trimethoxymethane CAS 149-73-5 CH(OCH ₃) ₃	TMOF C ₄ H ₁₀ O ₃	Trimethyl orthoformate Formic acid-o-trimethyl ester	106.1 3.66 r	0.97	104 219 °F	31.3	13 55 °F	1.4* (62)		1 mg/m ³ = 0.23 ppm			255 IIB T3
416	Trimethoxysilane CAS 2487-90-3 (CH ₃ O) ₃ SiH	TMOS C ₃ H ₁₀ O ₃ Si	Trimethoxy silylhydride	122.2 4.22 r	0.96	81 178 °F	9.6		1.0* (51)		1 mg/m ³ = 0.20 ppm			
417	Trimethyl-o-acetate CAS 1445-45-0 CH ₃ C(OCH ₃) ₃	TMOA C ₆ H ₁₂ O ₃	1.1.1-Trimethoxyethane Trimethoxyethane Acetic acid-o-trimethyl ester Trimethyl orthoacetate	120.2 4.15 r	0.96	108 226 °F	20		1.5* (75)		1 mg/m ³ = 0.20 ppm			
418	Trimethylamine CAS 75-50-3 (CH ₃) ₃ N	TMA C ₃ H ₉ N	N,N-Dimethylmethanamine	59.1 2.04 r	Gas	3 37 °F	Gas	Gas	2.0 (49)	2.0 (49)	2.0 (49)	2.0 (49)	2.0 (49)	190 IIA T4

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
406			IR IR	PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL (?) 100 %LEL (?)	
407	200 (1112)	350 (1945)	IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334	100 %LEL (\$) 100 %LEL (\$)	
408	11T (60)	25 (137)	IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334	65 / 100 %LEL 100 % LEL	
409		10 (61)	IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	80 / 100 %LEL (&) 100 %LEL (&) 65 / 100 %LEL 100 %LEL	
410			EC EC	Polytron 7000 and P 8100 AC Polytron 7000 and P 8100 HCl	Acid: 3 / 10 / 30 ppm / LDL = 0.5 ppm TrCS: 5 / 10 / 20 ppm / LDL = 0.5 ppm	S = 3.0
411			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	25 / 100 %LEL 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
412	1 (4.2)	25 (105)	CT IR IR IR IR IR EC EC EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 NH3 LC Polytron 7000 and P 8100 NH3 TL Polytron 8100 NH3 FL	100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL TEA: 100 ppm / LDL = 5 ppm TEA: 100 ppm / LDL = 2 ppm TEA: 100 ppm / LDL = 2 ppm	corrosive/sensor poison S = 0.5 S = 0.55* S = 0.55* / Polytron 8100 only
413			IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334	50 / 100 %LEL 50 + 100 %LEL	
414			IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334	100 %LEL (\$) 100 %LEL (\$)	
415			CT IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL 100 %LEL (?) 100 %LEL (?)	
416			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	25 / 100 %LEL 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL	
417			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	15 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL	
418		10 (25)	CT IR IR IR IR IR EC EC EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 NH3 LC Polytron 7000 and P 8100 NH3 TL Polytron 8100 NH3 FL	100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL TMA: 100 ppm / LDL = 5 ppm TMA: 100 ppm / LDL = 2 ppm TMA: 100 ppm / LDL = 2 ppm	corrosive/sensor poison S = 0.5 S = 0.55* S = 0.55* / Polytron 8100 only

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
419	1,2,4-Trimethylbenzene CAS 95-63-6 C ₆ H ₃ (CH ₃) ₃	C ₉ H ₁₂	Pseudocumene	120.2 4.15 r	0.88 336 °F 1 ppm = 5.01 mg/m ³	169 2.1	50 122 °F	0.8 (40)	0.9 (45)	0.9 (45)			485 IIA T1	
420	1,3,5-Trimethylbenzene CAS 108-67-8 C ₆ H ₃ (CH ₃) ₃	C ₉ H ₁₂	Mesitylene	120.2 4.15 r	0.87 329 °F 1 ppm = 5.01 mg/m ³	165 2.7	44 111 °F	1.0 (50)	0.8 (40)			0.8 (40)	550 IIA T1	
421	Trimethyl borane CAS 593-90-8 B(CH ₃) ₃	TMB C ₃ H ₉ B	Boron trimethyl	55.9 1.93 r	Gas -20 °F -4 °F 1 ppm = 2.33 mg/m ³	Gas	Gas					1 mg/m ³ = 0.43 ppm		
422	2,2,4-Trimethyl hexane CAS 16747-26-5 C ₂ H ₅ CH(CH ₃)CH ₂ C(CH ₃) ₃	C ₉ H ₂₀	i-Nonane Isononane	128.3 4.43 r 79 v	0.71 259 °F 1 ppm = 5.35 mg/m ³	126 16	15 59 °F	0.7 (37)				1 mg/m ³ = 0.19 ppm	IIA	
423	2,2,4-Trimethylpentane CAS 540-84-1 CH ₃ CH(CH ₃)CH ₂ C(CH ₃) ₃	C ₈ H ₁₈	i-Octane Isooctane	114.2 3.94 r 103 v	0.69 210 °F 1 ppm = 4.76 mg/m ³	99 53	-12 10 °F	1.0 (48)	0.7 (33)			1.1 (52)	1.0 (48)	410 IIA T2
424	2,4,4-Trimethyl-1-pentene CAS 107-39-1 CH ₂ =C(CH ₃)CH ₂ C(CH ₃) ₃	C ₉ H ₁₆	a-Diisobutylene Di-i-butylene	112.2 3.87 r 78 v	0.72 214 °F 1 ppm = 4.68 mg/m ³	101 46	-6 21 °F	0.8 (37)				0.8 (37)		415 IIA T2
425	Trimethyl silane CAS 993-07-7 SiH(CH ₃) ₃	TMS C ₃ H ₁₀ Si	2-Methyl-2-silapropane	74.2 2.56 r	Gas 45 °F 1 ppm = 3.09 mg/m ³	Gas	Gas	1.3 (40)				1 mg/m ³ = 0.32 ppm	235 T3	
426	Trimethylsilanol CAS 1066-40-6 (CH ₃) ₃ SiOH	TMS C ₃ H ₁₀ OSi	Hydroxytrimethylsilane Trimethylhydroxysilane	90.2 3.11 r	0.81 208 °F 1 ppm = 3.76 mg/m ³	98 16	16 61 °F	1.4 (53)				1 mg/m ³ = 0.27 ppm	380 T2	
427	1,3,5-Trioxane CAS 110-88-3 (CH ₂) ₃ O ₃	C ₃ H ₆ O ₃	Trioxymethylene 1,3,5-Trioxacyclohexane Metaformaldehyde	90.1 3.11 r	1.17 239 °F 1 ppm = 3.75 mg/m ³	115 11	45 113 °F	3.6 (135)	3.2 (120)			3.6 (135)	3.2 (120)	410 IIB T2
428	Tri-n-propylamine CAS 102-69-2 (C ₃ H ₇) ₃ N	C ₉ H ₂₁ N	N,N-Dipropyl-1-propanamine Tripropyl amine	143.3 4.95 r	0.75 313 °F 1 ppm = 5.97 mg/m ³	156 3.5	35 95 °F	0.7 (42)				0.7 (42)		180 T4
429	Tungsten hexafluoride CAS 7783-82-6 WF ₆	F ₆ W		297.8 10.28 r	Gas 63 °F 1 ppm = 12.41 mg/m ³	Gas	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
430	n-Undecane CAS 1120-21-4 C ₁₁ H ₂₄	C11 C ₁₁ H ₂₄	Henecane	156.3 5.40 r	0.74 385 °F 1 ppm = 6.51 mg/m ³	196 0.5	61 142 °F	0.6 (39)				1 mg/m ³ = 0.15 ppm	195 IIA T4	
431	Vinyl acetate CAS 108-05-4 CH ₃ COOCH=CH ₂	VAM C ₄ H ₆ O ₂	Vinyl ethanoate Acetic acid vinyl ester Acetic acid ethenyl ester Ethenyl acetate Ethenyl ethanoate 1-Acetoxyethylene	86.1 2.97 r 150 v	0.93 162 °F 1 ppm = 3.59 mg/m ³	72 120	-8 18 °F	2.6 (93)	2.6 (93)	2.6 (93)	2.6 (93)	2.6 (93)	2.6 (93)	385 IIA T2

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
419	20 (100)	25 (125)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 35 / 100 %LEL 50 + 100 %LEL 25 / 100 %LEL 50 + 100 %LEL 100 %LEL	
420	20 (100)	25 (125)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 25 / 100 %LEL // 2000 ppm Gas-Library 50 + 100 %LEL Gas-Library 20 / 100 %LEL // 1600 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	
421			EC	Polytron 7000 and P 8100 Hydrides		on request
422			CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	100 %LEL 20 / 100 %LEL // 1400 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 10 / 100 %LEL // 560 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	
423			CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	100 %LEL 20 / 100 %LEL // 1400 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 10 / 100 %LEL // 700 ppm Gas-Library 20 + 50 + 100 %LEL Gas-Library 100 %LEL	performance approved performance approved performance approved performance approved
424			IR IR IR IR IR EC	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	20 / 100 %LEL 20 + 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL as EtOH (100 / 200 / 300 ppm)	S = 0.6 (L)
425		5 (15)	EC EC	Polytron 7000 and P 8100 Hydrides Polytron 7000 and P 8100 Hydrides SC	TMS: 5 / 20 / 20 ppm / LDL = 0.3 ppm TMS: 1 / 5 / 20 ppm / LDL = 0.2 ppm	S = 0.11 S = 0.15
426			IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	40 / 100 %LEL 50 + 100 %LEL 25 / 100 %LEL 50 + 100 %LEL	
427			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	solid - melting point 62 °C
428			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	25 / 100 %LEL 50 + 100 %LEL 10 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL	
429			EC	Polytron 7000 and P 8100 AC	WF6: 3 / 10 / 30 ppm / LDL = 0.5 ppm	
430			IR IR	PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340	100 %LEL (?) 100 %LEL (?)	
431	5 (18)	4c (14)	CT IR IR IR IR EC	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 3000, P 5310, P 8310 Polytron 7000 and P 8100 OV1	10 // 100 %LEL 60 / 100 %LEL 100 %LEL 100 %LEL 100 %LEL VAc: 20 / 50 / 100 ppm / LDL = 5 ppm	polymerizing/sensor poison S = 0.8

List of detectable gases and vapours 2018

No.	Substance Chemical formula	Shortn. S-formula	Further synonyms	Molw. g/mol	Dens. g/ml	Boil. °C	P ₂₀ mbar	Flpt. °C	LEL PTB	LEL IEC	LEL NIOSH	LEL NFPA	LEL RUS	AIT °C
432	Vinylacetylene CAS 689-97-4 CH ₂ =CHCCH	C ₄ H ₄	Butenyne Butenine 1-Buten-3-yne 3-Butenyne-1	52.1 1.80 r	Gas	5 41 °F	Gas	Gas	2.0 (43)			2.1 (46)		
							1 ppm = 2.17 mg/m ³				1 mg/m ³ = 0.46 ppm			
433	Vinyl chloride CAS 75-01-4 CH ₂ =CHCl	VCM C ₂ H ₃ Cl	Chloroethene Chloroethylene R1140	62.5 2.16 r	Gas	-13 9 °F	Gas	Gas	3.8 (99)	3.6 (94)	3.6 (94)	3.6 (94)	3.6 (94)	415 IIA T2
							1 ppm = 2.60 mg/m ³				1 mg/m ³ = 0.38 ppm			
434	Vinylcyclohexane CAS 695-12-5 C ₆ H ₁₁ CH=CH ₂	C ₆ H ₁₄	Ethenylcyclohexane Cyclohexylethylene Cyclohexylethene Hexahydrostyrene	110.2 3.80 r	0.81	128 262 °F			0.9** (41)					
							1 ppm = 4.59 mg/m ³				1 mg/m ³ = 0.22 ppm			
435	4-Vinylcyclohexene CAS 100-40-3 C ₆ H ₉ CH=CH ₂	VCH C ₈ H ₁₂	1.2.5.6-Tetrahydrostyrene 4-Ethenyl-1-cyclohexene Cyclohexenylethylene	108.2 3.73 r 49 v	0.83	128 262 °F	14	15 59 °F	0.6 (27)	0.8 (36)		1.0 (45)	0.8 (36)	265 IIA T3
							1 ppm = 4.51 mg/m ³				1 mg/m ³ = 0.22 ppm			
436	Vinyl fluoride CAS 75-02-5 CH ₂ =CHF	VF C ₂ H ₃ F	Fluoroethene Fluoroethylene R1141	46.0 1.59 r	Gas	-72 -98 °F	Gas	Gas	2.9 (56)			2.6 (50)		375 T2
							1 ppm = 1.92 mg/m ³				1 mg/m ³ = 0.52 ppm			
437	Vinylmethyl ether CAS 107-25-5 CH ₂ =CHOCH ₃	VME C ₃ H ₆ O	Methoxyethene Ethenyl methylether Methylvinyl ether	58.1 2.01 r	Gas	6 43 °F	Gas	Gas	2.2 (53)			2.6 (63)		220 IIB T3
							1 ppm = 2.42 mg/m ³				1 mg/m ³ = 0.41 ppm			
438	Vinylmethylketone CAS 78-94-4 CH ₃ COCH=CH ₂	MVK C ₄ H ₆ O	Methylvinylketone 1-Buten-3-one Methylene acetone	70.1 2.42 r	0.83	81 178 °F	100	-7 19 °F				2.1 (61)		
							1 ppm = 2.92 mg/m ³				1 mg/m ³ = 0.34 ppm			
439	2-Vinylpyridine CAS 100-69-6 C ₆ H ₄ N(CH=CH ₂)	2VP C ₇ H ₇ N	2-Ethenylpyridine 2-Pyridylethylene 2-Pyridylethene	105.1 3.63 r	0.97	159 318 °F	2.5	35 95 °F		1.2 (53)			1.2 (53)	482 IIA T1
							1 ppm = 4.38 mg/m ³				1 mg/m ³ = 0.23 ppm			
440	Vinyltrimethoxysilane CAS 2768-02-7 CH ₂ =CHSi(OCH ₃) ₃	VTMOS C ₆ H ₁₂ O ₃ Si	Ethenyltrimethoxysilane Trimethoxy vinylsilane Trimethoxy silylethene	148.2 5.12 r 67 v	0.97	124 255 °F		23 73 °F	0.7 (43)					235 IIB T3
							1 ppm = 6.18 mg/m ³				1 mg/m ³ = 0.16 ppm			
441	m-Xylene CAS 108-38-3 C ₆ H ₄ (CH ₃) ₂	C ₈ H ₁₀	1.3-Dimethylbenzene m-Xylol	106.2 3.67 r 77 v	0.86	139 282 °F	8.3	25 77 °F	1.0 (44)	1.0 (44)	1.1 (49)	1.1 (49)		540 IIA T1
							1 ppm = 4.43 mg/m ³				1 mg/m ³ = 0.23 ppm			
442	o-Xylene CAS 95-47-6 C ₆ H ₄ (CH ₃) ₂	C ₈ H ₁₀	1.2-Dimethylbenzene o-Xylol	106.2 3.67 r 75 v	0.88	144 291 °F	6.7	30 86 °F	1.0 (44)	1.0 (44)	0.9 (40)	0.9 (40)	1.0 (44)	465 IIA T1
							1 ppm = 4.43 mg/m ³				1 mg/m ³ = 0.23 ppm			
443	p-Xylene CAS 106-42-3 C ₆ H ₄ (CH ₃) ₂	C ₈ H ₁₀	1.4-Dimethylbenzene p-Xylol	106.2 3.67 r 77 v	0.86	138 280 °F	8.9	25 77 °F	1.0 (44)	0.9 (40)	1.1 (49)	1.1 (49)		540 IIA T1
							1 ppm = 4.43 mg/m ³				1 mg/m ³ = 0.23 ppm			

No.	WEL Germ.	TLV USA	MP	Detectable with	Suitable measuring ranges	Important remarks
432			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL (?)	polymerizing/sensor poison
433		1 (2.6)	CT EC	P 5200, P 8200, PEX 3000, SE Ex Polytron 7000 and P 8100 OV1	10 // 100 %LEL VC: 20 / 50 / 100 ppm / LDL = 5 ppm	corrosive/sensor poison S = 0.8
434			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	35 / 100 %LEL 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL (?)	
435			IR IR EC	PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 Polytron 7000 and P 8100 OV1	100 %LEL (?) 100 %LEL (?) as EtOH (100 / 200 / 300 ppm)	S = 0.5 (L)
436		1 (1.9)	EC	Polytron 7000 and P 8100 OV1	as VC (20 / 50 / 100 ppm)	S = 0.8 (L)
437	50 (121)		IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	25 / 100 %LEL 50 + 100 %LEL 20 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL	
438			CT	P 5200, P 8200, PEX 3000, SE Ex	100 %LEL	
439			IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334	35 / 100 %LEL 50 + 100 %LEL	
440			IR IR IR IR IR	PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	20 / 100 %LEL 20 + 50 + 100 %LEL 15 / 100 %LEL 20 + 50 + 100 %LEL 100 %LEL	
441	100 (443)	100 (443)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 30 / 100 %LEL 50 + 100 %LEL 30 / 100 %LEL 50 + 100 %LEL 100 %LEL	
442	100 (443)	100 (443)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 30 / 100 %LEL // 2500 ppm Gas-Library 50 + 100 %LEL Gas-Library 30 / 100 %LEL // 2500 ppm Gas-Library 50 + 100 %LEL Gas-Library 100 %LEL	performance approved with sensor ... DD performance approved performance approved performance approved performance approved
443	100 (443)	100 (443)	CT IR IR IR IR IR	P 5200, P 8200, PEX 3000, SE Ex PIR 7000 type 334, P 8700 type 334 Polytron 5700 type 334 PIR 7000 type 340, P 8700 type 340 Polytron 5700 type 340 PIR 3000, P 5310, P 8310	10 // 100 %LEL 30 / 100 %LEL 50 + 100 %LEL 30 / 100 %LEL 50 + 100 %LEL 100 %LEL	

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