



Safety Data Sheet
acc. to OSHA HCS & WHMIS

Printing date 09/28/2015

Reviewed on 09/28/2015

1 Identification

- **Product identifier:** DEVELOPER-STANDARD
- **Trade name:** CANTESCO® DEVELOPER D101 - NONAQUEOUS WET
- **Code** D101-A
- **Item number(s):** D101-A
- **MSDS Number:** 13
- **UPC bar code(s):** 699913-10370
- **Relevant identified uses of the substance:** DYE PENETRANT DEVELOPER
- **Manufacturer/Supplier:**
WWW.CANTESCO.COM

USA ADDRESS:

KEMPER SYSTEM AMERICA, INC.
1200 NORTH AMERICA DR,
WEST SENECA, NY 14224
PH (716) 558-2971

CANADIAN ADDRESS:

KEMPER SYSTEM CANADA
6345 NETHERHART ROAD
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PH (905) 624-5463
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- **Information department:**
Tel: (716) 558-2971 ext. 228
www.cantesco.com
- **Emergency telephone number:**
ChemTrec (800) 424-9300
Canada only: CANUTECH (Call collect) (613) 996-6666

2 Hazard(s) identification

- **Classification of the substance or mixture:**



GHS02 Flame

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurized container: May burst if heated.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Signal word:** Danger
- **Hazard-determining components of labeling:**
acetone

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· **Hazard statements:**

Extremely flammable aerosol. Pressurized container: May burst if heated.
Causes serious eye irritation.
May cause drowsiness or dizziness.

· **Precautionary statements:**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Pressurized container: Do not pierce or burn, even after use.
Do not spray on an open flame or other ignition source.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear eye protection / face protection.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a poison center/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **WHMIS-symbols:**

A - Compressed gas
B5 - Flammable aerosol
D2A - Very toxic material causing other toxic effects



· **NFPA ratings (scale 0 - 4):**



Health = 2
Fire = 4
Reactivity = 0

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

67-64-1	acetone	30-60%
68476-86-8	Petroleum gases, liquefied, sweetened	25-40%
14808-60-7	Quartz (SiO ₂)	0.3-<1%

· **Additional information:** Exact concentrations are being withheld as trade secrets.

4 First-aid measures

· **After inhalation:**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

· **After skin contact:** Immediately rinse with water.

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- **After eye contact:**
Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If eye irritation persists get medical advice/attention.
- **After swallowing:** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

5 Fire-fighting measures

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures:**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:**
Do not spray on a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Not required.

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- **Further information about storage conditions:**
 - Keep receptacle tightly sealed.
 - Do not gas tight seal receptacle.
 - Store in cool, dry conditions in well sealed receptacles.
 - Protect from heat and direct sunlight.
- **Specific end use(s):** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

· **Components with limit values that require monitoring at the workplace:**

67-64-1 acetone

EL (Canada)	Short-term value: 500 ppm Long-term value: 250 ppm
EV (Canada)	Short-term value: 750 ppm Long-term value: 500 ppm
PEL (USA)	Long-term value: 2400 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 590 mg/m ³ , 250 ppm
TLV (USA)	Short-term value: (1782) NIC-1187 mg/m ³ , (750) NIC-500 ppm Long-term value: (1188) NIC-594 mg/m ³ , (500) NIC-250 ppm BEI

· **Ingredients with biological limit values:**

67-64-1 acetone

BEI (USA)	50 mg/L Medium: urine Time: end of shift Parameter: Acetone (nonspecific)
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- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Store protective clothing separately.
 - Avoid contact with the eyes.
 - Avoid contact with the eyes and skin.
- **Breathing equipment:** Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves:**
 - Butyl rubber, BR
 - Nitrile rubber, NBR

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· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· Form:	Liquid Under Pressure
· Color:	Cloudy
· Odor:	Mild
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	-95.3 °C
Boiling point/Boiling range:	> 56 °C
· Flash point:	-104 °C (Prop. (-17 °C Liq.))
· Flammability (solid, gaseous):	Extremely flammable liquefied gas.
· Ignition temperature:	465 °C
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits	
Lower:	2.6 Vol %
Upper:	13.0 Vol %
· Vapor pressure at 20 °C:	233 hPa
· Density at 20 °C:	0.715 g/cm ³
· Relative density:	Not determined.
· Vapour density at 20 °C:	2.0 (AIR=1)
· Evaporation rate at 20 °C:	>5.7 (BA=1)
· Solubility in / Miscibility with	
Water:	Emulsifiable.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	54.5 %

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Solids content:	9.1 %	
· Other information	VOC Content:	259.994 g/l
	VOC %:	37%
	HAP Content:	None
	MIR Value:	0.588 g O ₃ /g
	Heat of Combustion:	31.592 MJ/kg

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects:**
- **Acute toxicity**

- **LD/LC50 values that are relevant for classification:**

67-64-1 acetone

Oral	LD50	5800 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rabbit)

- **Primary irritant effect**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

Carcinogenic.

The product can cause inheritable damage.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

7631-86-9	silicon dioxide, chemically prepared	3
14808-60-7	Quartz (SiO ₂)	1
71-43-2	benzene	1

- **NTP (National Toxicology Program)**

14808-60-7	Quartz (SiO ₂)	K
71-43-2	benzene	K

- **OSHA-Ca (Occupational Safety & Health Administration)**

71-43-2	benzene	
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12 Ecological information

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information**
- **General notes:**
 Water hazard class 3 (Self-assessment): extremely hazardous for water
 Do not allow product to reach ground water, water course or sewage system, even in small quantities.
 Danger to drinking water if even extremely small quantities leak into the ground.
- **Other adverse effects:** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings**
- **Recommendation:**
 Place in a sealed container and label as waste. Place in a safe area, and comply with all federal, state, provincial and local regulations for disposal.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · DOT, TDG, IMDG, IATA 	UN1950
<ul style="list-style-type: none"> · UN proper shipping name · DOT · TDG · IMDG · IATA 	Aerosols, flammable 1950 Aerosols AEROSOLS AEROSOLS, flammable
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	
<ul style="list-style-type: none"> · Class · Label · TDG (Transport dangerous goods): 	2.1 2.1
<ul style="list-style-type: none"> · Class 	 2 5F Gases

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· **Label** 2.1

· **IMDG, IATA**



· **Class** 2.1
 · **Label** 2.1

· **Packing group**
 · **DOT, TDG, IMDG, IATA** Not regulated

· **Environmental hazards:**
 · **Marine pollutant:** No

· **Special precautions for user:** Warning: Gases
 · **Danger code (Kemler):** -
 · **EMS Number:** F-D,S-U

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

· **Transport/Additional information:**

· **DOT**
 · **Quantity limitations** On passenger aircraft/rail: 75 kg
 On cargo aircraft only: 150 kg
 · **Remarks:** This product may be shipped according to the Limited Quantity Exceptions provided that all Limited Quantity shipping requirements are met.

· **TDG** This product may be shipped according to the Limited Quantity Exceptions provided that all Limited Quantity shipping requirements are met.
 · **Excepted quantities (EQ)** Code: E0
 Not permitted as Excepted Quantity

· **IMDG**
 · **Limited quantities (LQ)** 1L
 · **Excepted quantities (EQ)** Code: E0
 Not permitted as Excepted Quantity
 · **Remarks:** This product may be shipped according to the Limited Quantity Exceptions provided that all Limited Quantity shipping requirements are met.

· **IATA**
 · **Remarks:** This product may be shipped according to the Limited Quantity Exceptions provided that all Limited Quantity shipping requirements are met.

· **UN "Model Regulation":** UN1950, Aerosols, 2.1

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

71-43-2 | benzene

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed or exempted

· **Proposition 65**

· **Chemicals known to cause cancer:**

14808-60-7 | Quartz (SiO₂)

71-43-2 | benzene

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

71-43-2 | benzene

· **Chemicals known to cause developmental toxicity:**

71-43-2 | benzene

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency):**

67-64-1 | acetone

I

71-43-2 | benzene

A, K/L

· **TLV (Threshold Limit Value established by ACGIH):**

67-64-1 | acetone

A4

14808-60-7 | Quartz (SiO₂)

A2

71-43-2 | benzene

A1

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

14808-60-7 | Quartz (SiO₂)

71-43-2 | benzene

· **Canadian substance listings**

· **Canadian Domestic Substances List (DSL):**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%):**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%):**

67-64-1 | acetone

7631-86-9 | silicon dioxide, chemically prepared

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**



GHS02 GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**

acetone

· **Hazard statements**

Extremely flammable aerosol. Pressurized container: May burst if heated.

Causes serious eye irritation.

May cause drowsiness or dizziness.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Pressurized container: Do not pierce or burn, even after use.

Do not spray on an open flame or other ignition source.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear eye protection / face protection.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a poison center/doctor if you feel unwell.

If eye irritation persists: Get medical advice/attention.

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.

Exceptions can be made by the authorities in certain cases.

16 Other information

This MSDS format meets ANSI Z400.1-1998, OSHA 1910.1200 and WHMIS requirements. Kemper System America, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Product use and conditions of use are beyond the control of Kemper System America, Inc. Warranty of materials is limited to test results of product performance as detailed in certificates of compliance. Interpretation of test results is the responsibility of end-user. No other warranties, expressed or implied, are made. Kemper System America, Inc is an ISO 9001:2008 and ISO 14001:2004 registered company.

· **Department issuing MSDS:** Product safety department

· **Contact:** Stephen Nowicki

· **Date of preparation / last revision** 09/28/2015 / 2

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Aerosol 1: Flammable aerosols, Hazard Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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