

# **SAFETY DATA SHEET (SDS )**

**SDS – 076**

**Revision number: 1**

**Rev. 5/16**

**AUTION CHECK Plus Control–Level 1**

**Part Numbers: 102478**

**For use with the AUTION HYBRID AU-4050, AUTION MAX AX-4280  
& AUTION MAX AX-4030**

**ARKRAY USA, Inc.**

**5182 West 76<sup>th</sup> Street**

**Minneapolis, Minnesota 55439**

**Technical Customer Service Phone:**

**1-855.646.3108**

## SAFETY DATA SHEET

SDS No. : 73527UA-1  
Issue Date : 13 Apr. 2016  
Revision Date : -

### 1. IDENTIFICATION

#### 1.1 Product Identifier

**Product name:** AUTION CHECK Plus Level 1

**Product number:** 102478

#### 1.2 Intended Use of the Product

Laboratory Quality Control Material. For professional use only.

#### 1.3 Name, Address, and Telephone of the Responsible Party

**ARKRAY FACTORY, Inc.**

**Address** : 1480 Koji, Konan-cho, Koka-shi, Shiga, Japan

**Phone** : +81-748-86-6901

**Facsimile** : +81-748-86-5347

**European representative**

ARKRAY Europe, B. V.

**Address** : Prof. J. H. Bavincklaan 2, 1183 AT Amstelveen, the Netherlands

**Phone** : +31-20-545-2450

**Facsimile** : +31-20-545-2459

#### 1.4 Emergency telephone number

**Emergency Number:** +31-20-545-2450

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the Substance or Mixture

**GHS – US classification**

Skin Sens .1 H317

**Full text of H – phrases:** see section 16

#### 2.2 Label elements

**GHS – US Labeling**

**Hazard Pictograms (GHS - US):**



**Signal Word (GHS - US):** Warning

**Hazard Statements (GHS - US):** H317 – May cause an allergic skin reaction.

**Precautionary Statements (GHS - US):** P261 – Avoid breathing vapors, mist, or spray.

P272 – Contaminated work clothing must not be allowed out of the workplace.

P280 – Wear protective gloves, protective clothing , and eye protection.

P302 + P352 – IF ON SKIN: Wash with plenty of water.

P333 + P313 – if skin irritation or rash occurs: Get medical advice / attention.

P363 – Wash contaminated clothing before reuse.

P501 – Dispose of contents/container in accordance with local, regional, national, and international regulations.

### 2.3 Other Hazards

No additional information available.

### 2.4 Unknown Acute Toxicity (GHS – US) No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substance

Not applicable

### 3.2 Mixture

Name	Product identifier	%(w/w)	GHS – US classification
1,2-Propylene glycol	(CAS No) 57-55-6	5	Not classified
Mixture, 3(2H)-isothiazolone,5-chloro- 2-methyl-with 2-methyl-3(2H)-isothiazolone	(CAS No) 55965-84-9	0.003	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:dust,mist), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H - phrases: see section 16

## 4. FIRST AID MEASURES

### 4.1 Description of First Aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical Advice. (show the label where possible).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Ingestion:** Rinse mouth. Do NOT induce vomiting.

### 4.2 Most Important Symptoms and Effects Both Acute and Delayed

**General:** May cause an allergic reaction in sensitive individuals.

**Inhalation:** Not expected to present a significant inhalation hazard under anticipated conditions of normal use.

**Skin Contact:** May cause sensitization of susceptible persons by skin contact.

**Eye Contact:** May cause eye irritation.

**Ingestion:** If a large quantity has been ingested : May cause nausea, vomiting, and diarrhea.

**Chronic Symptoms:** None expected under anticipated conditions of normal use.

### 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing Media

**Suitable Extinguishing Media:** Carbon dioxide, dry chemical powder, alcohol foam, polymer foam, water spray, fog.

**Unsuitable Extinguishing Media:** None known.

### 5.2 Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

### 5.3 Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

**Firefighting Instructions:** Exercise caution when fighting any chemical fire.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** The product is not flammable. However under fire conditions, decomposition may produce carbon monoxide and carbon dioxide.

#### Reference to Other Sections

Refer to section 9 for flammability properties.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid breathing vapor, mist, or spray. Avoid contact with skin, eyes, or clothing.

#### 6.1.1 For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency procedures:** Evacuate unnecessary personnel.

#### 6.1.2 For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area.

### 6.2 Environmental Precautions

Prevent entry to sewers and public waters.

### 6.3 Methods and Material for Containment and Cleaning Up

**For Containment:** Absorb and/or contain spill with inert material, then place in suitable container.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely.

### 6.4 Reference to Other Sections

See heating 8, Exposure Controls and Personal Protection.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for Safe Handling

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

## 7.2 Conditions for Safe Storage, Including Any Incompatibilities

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers.

## 7.3 Specific End Use(s)

Laboratory Quality Control Material. For professional use only.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 Control Parameters

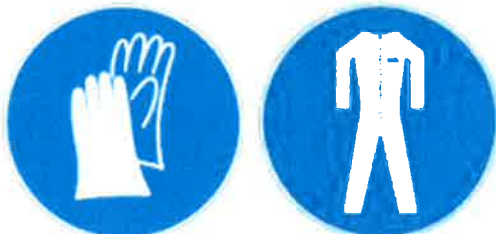
For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

1,2-Propylene glycol (57-55-6)		
USA AIHA	WEELE TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (for assessing the visibility in a work environment where 1,2-Propylene glycol aerosol is present – aerosol only) 155 mg/m <sup>3</sup> (aerosol and vapor)
Ontario	OEL TWA (ppm)	50 ppm (aerosol and vapor)

## 8.2 Exposure Controls

**Appropriate Engineering Controls:** Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

**Personal Protective Equipment:** Gloves. Protective clothing.



**Materials for Protective Clothing:** Chemically resistant fabrics and materials.

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** None required under normal conditions of use.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

**Other Information:** When using, do not eat, drink or smoke.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

**9.1 Information on Basic Physical and Chemical Properties**

<b>Physical State</b>	:	Liquid
<b>Appearance</b>	:	Amber Yellow
<b>Odor</b>	:	Odorless
<b>Odor Threshold</b>	:	Not available
<b>pH</b>	:	6
<b>Evaporation Rate</b>	:	Not available
<b>Melting Point</b>	:	Not available
<b>Freezing Point</b>	:	Not available
<b>Boiling Point</b>	:	Not available
<b>Flash Point</b>	:	Not available
<b>Auto-ignition Temperature</b>	:	Not available
<b>Decomposition Temperature</b>	:	Not available
<b>Flammability (solid, gas)</b>	:	Not available
<b>Lower Flammable Limit</b>	:	Not available
<b>Upper Flammable Limit</b>	:	Not available
<b>Vapor Pressure</b>	:	Not available
<b>Relative Vapor Density at 20°C</b>	:	Not available
<b>Specific Gravity</b>	:	1
<b>Solubility</b>	:	Not available
<b>Partition Coefficient N-Octanol/Water</b>	:	Not available
<b>Viscosity</b>	:	Not available
<b>Explosion Data–Sensitivity to Mechanical Impact</b>	:	Not expected to present an explosion hazard due to mechanical impact.
<b>Explosion Data–Sensitivity to Static Discharge</b>	:	Not expected to present an explosion hazard due to static discharge.

**10. STABILITY AND REACTIVITY**

**10.1 Reactivity:** Hazardous reactions will not occur under normal conditions.

**10.2 Chemical stability:** Product is stable.

**10.3 Possibility of hazardous reactions:** Hazardous polymerization will not occur.

**10.4 Conditions to avoid:** Direct sunlight. Extremely high or low temperatures.

**10.5 Incompatible materials:** Strong acids. Strong bases. Strong oxidizers.

**10.6 Hazardous decomposition products:** The product is not flammable. However, under fire conditions, decomposition may produce carbon monoxide and carbon dioxide.

**11. TOXICOLOGICAL INFORMATION****11.1 Information on Toxicological Effects - Product**

**Acute Toxicity:** Not classified

**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Not classified

**Serious Eye Damage/Irritation:** Not classified

**Respiratory or Skin Sensitization:** May cause an allergic skin reaction.

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not available

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Not expected to present a significant inhalation hazard under anticipated conditions of normal use.

**Symptoms/Injuries After Skin Contact:** May cause sensitization of susceptible persons by skin contact.

**Symptoms/Injuries After Eye Contact:** May cause eye irritation.

**Symptoms/Injuries After Ingestion:** If a large quantity has been ingested: May cause nausea, vomiting, and diarrhea.

**Chronic Symptoms:** None expected under anticipated conditions of normal use.

## 11.2. Information on Toxicological Effects—Ingredient(s)

**LD50 and LC50 Data:**

<b>1,2-Propylene glycol (57-55-6)</b>	
<b>LD50 Oral Rat</b>	20 g/kg
<b>LD50 Dermal Rabbit</b>	20800 mg/kg

<b>Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (55965-84-9)</b>	
<b>LD50 Oral Rat</b>	53 mg/kg
<b>ATE US (oral)</b>	53.00 mg/kg body weight
<b>ATE US (dermal)</b>	300.00 mg/kg body weight
<b>ATE US (dust, mist)</b>	0.50 mg/l/4h

## 12. ECOLOGICAL INFORMATION

**12.1 Toxicity** No additional information available

<b>1,2-Propylene glycol (57-55-6)</b>	
<b>LC50 fish 1</b>	51600 mg/l (Exposure time: 96 h—Species: Oncorhynchus mykiss [static])
<b>EC50 Daphnia 1</b>	10000 mg/l (Exposure time: 24 h – Species: Daphnia magna)
<b>LC50 fish 2</b>	41–47 ml/l (Exposure time: 96 h—Species: Oncorhynchus mykiss [static])
<b>EC50 Daphnia 2</b>	1000 mg/l (Exposure time: 48 h—Species: Daphnia magna[static])

**12.2 Persistence and Degradability**

<b>AUTION CHECK Plus Level 1</b>	
<b>Persistence and Degradability</b>	Not established

**12.3 Bioaccumulative Potential**

**AUTION CHECK Plus Level 1**

<b>Bioaccumulative Potential</b>	Not established
----------------------------------	-----------------

**1,2-Propylene glycol (57-55-6)**

<b>BCF Fish 1</b>	< 1
-------------------	-----

<b>Log Pow</b>	-0.92
----------------	-------

**12.4 Mobility in Soil**

Not available

**12.5 Other Adverse Effects****Other information:** Avoid release to the environment.**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Waste disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national and international regulations.**14. TRANSPORT INFORMATION****14.1. In Accordance with DOT** Not regulated for transport**14.1. In Accordance with IMDG** Not regulated for transport**14.1. In Accordance with IATA** Not regulated for transport**14.1. In Accordance with TDG** Not regulated for transport**15. REGULATORY INFORMATION****15.1. US Federal Regulations****1,2-Propylene glycol (57-55-6)**

Listed on the United States TSCA (Toxic Substances Control Act) inventory

**EPA TSCA Regulatory Flag**

Y2-Y2—indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule

**15.2. US State Regulations****1,2-Propylene glycol (57-55-6)**

U.S. —New Jersey—Right to know Hazardous Substance List

U.S. —Pennsylvania—RTK (Right to know) List

**15.3. Canadian Regulations****AUTION CHECK Plus Level 1**

<b>WHMIS Classification</b>	Class D Division 2 Subdivision B—Toxic material causing other toxic effects
-----------------------------	---





<b>1,2-Propylene glycol (57-55-6)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

<b>Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (55965-84-9)</b>	
Listen on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision B-Toxic material causing other toxic effects Class E-Corrosive Material Class D Division 1 Subdivision B-Toxic material causing immediate and serious toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

## 16. OTHER INFORMATION, INCLUDING DATA OF PREPARATION OR LAST REVISION

Date sources: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### GHS Full text Phrases :

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation: dust, mist)	Acute toxicity (inhalation: dust, mist), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment – Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment – Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Sens. 1	Skin Sensitization Category 1
STOT SE 3	Specific target organ toxicity (Single exposure) Category 3
H290	May be corrosive to metals
H301	Toxic if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H331	Toxic if inhaled
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H401	Toxic to aquatic life

H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects

**Party Responsible for the Preparation of This Document****ARKRAY FACTORY, Inc.**

Address : 1480 Koji, Konan-cho, Koka-shi, Shiga, Japan

Phone : +81-748-86-6901

Facsimile : +81-748-86-5347

**European representative**

ARKRAY Europe, B. V.

Address : Prof. J. H. Bavincklaan 2, 1183 AT Amstelveen, the Netherlands

Phone : +31-20-545-2450

Facsimile : +31-20-545-2459

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

# **SAFETY DATA SHEET (SDS )**

**SDS – 085**

**Revision number: 1**

**Rev. 5/16**

**AUTION CHECK Plus Control–Level 2**

**Part Numbers: 102478**

**For use with the AUTION HYBRID AU-4050, AUTION MAX  
AX-4280 & AUTION MAX AX-4030**

**ARKRAY USA, Inc.**

**5182 West 76<sup>th</sup> Street**

**Minneapolis, Minnesota 55439**

**Technical Customer Service Phone:**

**1-855.646.3108**

## SAFETY DATA SHEET

SDS No. : 73527UA-2  
Issue Date : 13 Apr. 2016  
Revision Date :-

### 1. IDENTIFICATION

#### 1.1 Product Identifier

**Product name:** AUTION CHECK Plus Level 2

**Product number:** 102478

#### 1.2 Intended Use of the Product

Laboratory Quality Control Material. For professional use only.

#### 1.3 Name, Address, and Telephone of the Responsible Party

**ARKRAY FACTORY, Inc.**

**Address** : 1480 Koji, Konan-cho, Koka-shi, Shiga, Japan

**Phone** : +81-748-86-6901

**Facsimile** : +81-748-86-5347

**European representative**

ARKRAY Europe, B. V.

**Address** : Prof. J. H. Bavincklaan 2, 1183 AT Amstelveen, the Netherlands

**Phone** : +31-20-545-2450

**Facsimile** : +31-20-545-2459

#### 1.4 Emergency telephone number

**Emergency Number:** +31-20-545-2450

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the Substance or Mixture

**GHS – US classification**

Skin Sens. 1 H317

**Full text of H-phrases:** see section 16

#### 2.2 Label Elements

**GHS–US Labeling**

**Hazard Pictograms (GHS-US):**



**Signal Word (GHS-US):** Warning

**Hazard Statements (GHS-US):** H317 – May cause an allergic skin reaction.

**Precautionary Statements (GHS-US):** P261 – Avoid breathing vapors, mist, or spray.

P272 – Contaminated work clothing should not be allowed out of the workplace.

P280 – Wear protective gloves, protective clothing, and eye protection.

P302 + P352 – IF ON SKIN: Wash with plenty of water.

P333 + P313 – if skin irritation or rash occurs: Get medical advice/attention.

P363 – Wash contaminated clothing before reuse.

P501 – Dispose of contents/container in accordance with local, regional, national, and international regulations.

### 2.3 Other Hazards

No additional information available.

### 2.4 Unknown Acute Toxicity (GHS–US) No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substance

Not applicable

### 3.2 Mixture

Name	Product identifier	%(w/w)	GHS – US classification
2,4-Pentanedione	(CAS No) 123-54-6	0.11	Flam.Liq.3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox, 3 (Inhalation: vapour), H331 Aquatic Acute 3, H402
Mixture, 3(2H)-isothiazolone,5-chloro- 2-methyl-with 2-methyl-3(2H)-isothiazolone	(CAS No) 55965-84-9	0.003	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317

Full text of H-phrases: see section 16

## 4. FIRST AID MEASURES

### 4.1 Description of First Aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.(show the label where possible).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Ingestion:** Rinse mouth, Do NOT induce vomiting.

### 4.2 Most Important Symptoms and Effects Both Acute and Delayed

**General:** May cause an allergic reaction in sensitive individuals.

**Inhalation:** Not expected to present a significant inhalation hazard under anticipated conditions of normal use.

**Skin Contact:** May cause sensitization of susceptible persons by skin contact.

**Eye Contact:** May cause eye irritation.

**Ingestion:** If a large quantity has been ingested: May cause nausea, vomiting, and diarrhea.

**Chronic Symptoms:** None expected under anticipated conditions of normal use.

**4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed**

If medical advice is needed, have product container at hand.

**5. FIRE - FIGHTING MEASURES****5.1 Extinguishing Media**

**Suitable Extinguishing Media:** Carbon dioxide, dry chemical powder, alcohol foam, polymer foam, water spray, fog

**Un suitable Extinguishing Media:** None known.

**5.2 Special Hazards Arising From the Substance or Mixture**

**Fire Hazard:** Not flammable.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

**5.3 Advice for Firefighters**

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

**Firefighting Instructions:** Exercise caution when fighting any chemical fire.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** The product is not flammable. However, under fire conditions, decomposition may produce carbon monoxide and carbon dioxide.

**Reference to Other Sections**

Refer to section 9 for flammability properties.

**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Avoid breathing vapor, mist, or spray. Avoid contact with skin, eyes, or clothing.

**6.1.1 For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency procedures:** Evacuate unnecessary personnel.

**6.1.2 For Emergency Personnel**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area.

**6.2 Environmental Precautions**

Prevent entry to sewers and public waters.

**6.3 Methods and Material for Containment and Cleaning Up**

**For Containment:** Absorb and/or contain spill with inert material, then place in suitable container.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely.

**6.4 Reference to Other Sections**

See heating 8, Exposure Controls and Personal Protection.

**7. HANDLING AND STORAGE****7.1 Precautions for Safe Handling**

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

## 7.2 Conditions for Safe Storage, Including Any Incompatibilities

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers.

## 7.3 Specific End Use(s)

Laboratory Quality Control Material. For professional use only.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

2,4-Pentanedione (123-54-6)		
USA ACGIH	ACGIH TWA (ppm)	25 ppm
USA ACGIH	ACGIH chemical category	Skin–potential significant contribution to overall exposure by the cutaneous route
Manitoba	OEL TWA (ppm)	25 ppm
Newfoundland & Labrador	OEL TWA (ppm)	25 ppm
Nova Scotia	OEL TWA (ppm)	25 ppm
Ontario	OEL TWA (ppm)	25 ppm
Prince Edward Island	OEL TWA (ppm)	25 ppm

## 8.2 Exposure Controls

**Appropriate Engineering Controls:** Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

**Personal Protective Equipment:** Protective goggles. Gloves. Protective clothing.



**Materials for Protective Clothing:** Chemically resistant fabrics and materials.

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** Chemical goggles or safety glasses.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

**Other Information:** When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on Basic Physical and Chemical Properties

Physical State	:	Liquid
Appearance	:	Amber Yellow
Odor	:	Odorless
Odor Threshold	:	Not available
pH	:	6
Evaporation Rate	:	Not available
Melting Point	:	Not available
Freezing Point	:	Not available
Boiling Point	:	Not available
Flash Point	:	Not available
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	Not available
Relative Vapor Density at 20°C	:	Not available
Specific Gravity	:	1
Solubility	:	Not available
Partition Coefficient N-Octanol/Water	:	Not available
Viscosity	:	Not available
Explosion Data–Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data–Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge.

## 10. STABILITY AND REACTIVITY

**10.1 Reactivity:** Hazardous reactions will not occur under normal conditions.

**10.2 Chemical Stability:** Product is stable.

**10.3 Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**10.4 Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures.

**10.5 Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers.

**10.6 Hazardous Decomposition Products:** The product is not flammable. However, under fire conditions, decomposition may produce carbon monoxide and carbon dioxide.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects - Product

**Acute Toxicity:** Not classified



**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Not classified

**Serious Eye Damage/Irritation:** Not classified

**Respiratory or Skin Sensitization:** May cause an allergic skin reaction.

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not available

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Not expected to present a significant inhalation hazard under anticipated conditions of normal use.

**Symptoms/Injuries After Skin Contact:** May cause sensitization of susceptible persons by skin contact.

**Symptoms/Injuries After Eye Contact:** May cause eye irritation.

**Symptoms/Injuries After Ingestion:** If a large quantity has been ingested: May cause nausea, vomiting, and diarrhea.

**Chronic Symptoms:** None expected under anticipated conditions of normal use.

#### 11.2. Information on Toxicological Effects—Ingredient(s)

**LD50 and LC50 Data:**

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (55965-84-9)	
LD50 Oral Rat	53 mg/kg
ATE US (oral)	53.00 mg/kg body weight
ATE US (dermal)	300.00 mg/kg body weight
ATE US (dust, mist)	0.50 mg/l/4h

2,4-Pentanedione (123-54-6)	
LD50 Oral Rat	760 mg/kg
LD50 Dermal Rabbit	770 mg/kg
LC50 Inhalation Rat	5.01 mg/l/4h
LC50 Inhalation Rat	1224 ppm/4h

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity No additional information available

2,4-Pentanedione (123-54-6)	
LC50 Fish 1	98.3 - 110 mg/l (Exposure time: 96 h – Species : Pimephales promelas [flow - through])
EC50 Daphnia 1	34.4 mg/l (Exposure time: 48 h – Species :Daphnia magna)
LC50 Fish 2	50.3 – 71.8 ml/l (Exposure time: 96 h – Species : Lepomis macrochirus [flow - through])

### 12.2 Persistence and Degradability

AUTION CHECK Plus Level 2	
Persistence and Degradability	Not established.

**12.3 Bioaccumulative Potential**

<b>AUTION CHECK Plus Level 2</b>	
<b>Bioaccumulative Potential</b>	Not established.

**2,4-Pentanedione (123-54-6)**

<b>Log Pow</b>	0.34
----------------	------

**12.4 Mobility in Soil** Not available

**12.5 Other Adverse Effects**

**Other information:** Avoid release to the environment.

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods**

**Waste disposal Recommendations:** Dispose of waste material in accordance with all local, regional, and international regulations.

**14. TRANSPORT INFORMATION**

<b>14.1. In Accordance with DOT</b>	Not regulated for transport
<b>14.1. In Accordance with IMDG</b>	Not regulated for transport
<b>14.1. In Accordance with IATA</b>	Not regulated for transport
<b>14.1. In Accordance with TDG</b>	Not regulated for transport


**15. REGULATORY INFORMATION****15.1. US Federal Regulations**

<b>2,4-Pentanedione (123-54-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>EPA TSCA Regulatory Flag</b>	S - S – indicates a substance that is identified in a proposed or final Significant New Uses Rule.

**15.2. US State Regulations**

<b>2,4-Pentanedione (123-54-6)</b>	
U.S. – Massachusetts – Right To Know List	
U.S. – New Jersey – Right to know Hazardous Substance List	
U.S. – Pennsylvania – RTK (Right to know) List	

**15.3. Canadian Regulations**

<b>AUTION CHECK Plus Level 2</b>	
<b>WHMIS Classification</b>	Class D Division 2 Subdivision B – Toxic material causing other toxic effects
	

**2,4-Pentanedione (123-54-6)**

Listen on the Canadian DSL (Domestic Substances List)	
Listen on the Canadian IDL (Ingredient Disclosure List)	

IDL Concentration 1 %	
WHMIS Classification	Class B Division 2 – Flammable Liquid Class D Division 1 Subdivision B – Toxic material causing immediate and serious toxic effects Class D Division 1 Subdivision A – Very toxic material causing immediate and serious toxic effects

<b>Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (55965-84-9)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision B – Toxic material causing other toxic effects Class E – Corrosive Material Class D Division 1 Subdivision B – Toxic material causing immediate and serious toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

## 16. OTHER INFORMATION, INCLUDING DATA OF PREPARATION OR LAST REVISION

Date sources: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### GHS Full text Phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation: dust, mist)	Acute toxicity (inhalation: dust, mist) Category 3
Acute Tox. 3 (Inhalation: vapour)	Acute toxicity (inhalation: vapour) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (Oral) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (Oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment – Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment – Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Flam. Liq. 3	Flammable liquids Category 3
Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Sens. 1	Skin Sensitization Category 1
STOT SE 3	Specific target organ toxicity (Single exposure) Category 3
H226	Flammable liquid and vapour
H290	May be corrosive to metals
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage

H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H331	Toxic if inhaled
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects

**Party Responsible for the Preparation of This Document****ARKRAY FACTORY, Inc.**

Address : 1480 Koji, Konan-cho, Koka-shi, Shiga, Japan

Phone : +81-748-86-6901

Facsimile : +81-748-86-5347

**European representative**

ARKRAY Europe, B. V.

Address : Prof. J. H. Bavincklaan 2, 1183 AT Amstelveen, the Netherlands

Phone : +31-20-545-2450

Facsimile : +31-20-545-2459

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*