



# SAFETY DATA SHEET

Issuing Date 01-Aug-2014

Revision date 01-Nov-2023

Revision Number 3

## 1. Identification

### Product identifier

**Product Name** Clarifier 1

### Other means of identification

**Catalogue Number** 7401, 7441

**UN/ID no** UN1170

**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended use** No information available

**Restrictions on use** No information available

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Richard-Allan Scientific  
4481 Campus Drive  
Kalamazoo, MI 49008  
1-800-522-7270

### Emergency telephone number

**Emergency Telephone** Chemtrec US: (800) 424-9300

## 2. Hazard(s) identification

### Classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 1
Flammable liquids	Category 2
Corrosive to metals	Category 1

### Label elements

#### **Danger**

#### **Hazard statements**

Harmful if swallowed  
Causes severe skin burns and eye damage

Causes damage to organs  
Highly flammable liquid and vapor  
May be corrosive to metals

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Do not breathe dust/fume/gas/mist/vapors/spray  
Wear protective gloves/protective clothing/eye protection/face protection  
Ground and bond container and receiving equipment  
Use non-sparking tools  
Take action to prevent static discharges  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Keep container tightly closed  
Use explosion-proof electrical/ ventilating / lighting/ .? / equipment  
Keep only in original packaging

**Precautionary Statements - Response**

Immediately call a POISON CENTER or doctor  
Specific treatment (see .? on this label)

**Eyes**

Immediately call a POISON CENTER or doctor  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]  
Wash contaminated clothing before reuse

**Inhalation**

IF INHALED: Remove person to fresh air and keep comfortable for breathing  
Immediately call a POISON CENTER or doctor

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
Rinse mouth  
Do NOT induce vomiting

**Fire**

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

**Spill**

Absorb spillage to prevent material damage

**Precautionary Statements - Storage**

Store locked up  
Store in a well-ventilated place. Keep cool  
Store in a well-ventilated place  
Store in corrosion resistant container with a resistant inner liner

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

#### Other information

May be harmful in contact with skin May be harmful if inhaled Toxic to aquatic life

**Unknown acute toxicity** 92 % of the mixture consists of ingredient(s) of unknown toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

92 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

88.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

### 3. Composition/information on ingredients

#### Substance

Not applicable.

#### Mixture

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Ethyl alcohol	64-17-5	70 - 76	-	
Acetic acid	64-19-7	8-12	-	
Water	7732-18-5	5 - 10	-	
Isopropyl alcohol	67-63-0	4 - 5	-	
Methyl alcohol	67-56-1	4 - 5	-	

### 4. First-aid measures

#### Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Inhalation</b>	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid

contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

### **Most important symptoms and effects, both acute and delayed**

**Symptoms** Burning sensation.

### **Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

## **5. Fire-fighting measures**

**Suitable Extinguishing Media** Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray. Alcohol resistant foam.

**Unsuitable extinguishing media** CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical** Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

### **Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** Yes.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## **6. Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Attention! Corrosive material.

**Other information** Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

### **Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

**Methods for cleaning up** Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

#### **Advice on safe handling**

Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

### Conditions for safe storage, including any incompatibilities

#### **Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

## 8. Exposure controls/personal protection

### Control parameters

#### **Exposure Limits**

Chemical name	Alberta	British Columbia	Ontario	Quebec
Ethyl alcohol 64-17-5	TWA: 1000 ppm TWA: 1880 mg/m <sup>3</sup>	STEL: 1000 ppm	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1880 mg/m <sup>3</sup>
Acetic acid 64-19-7	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup> STEL: 15 ppm STEL: 37 mg/m <sup>3</sup>	TWA: 10 ppm STEL: 15 ppm	TWA: 10 ppm STEL: 15 ppm	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup> STEL: 15 ppm STEL: 37 mg/m <sup>3</sup>
Isopropyl alcohol 67-63-0	TWA: 200 ppm TWA: 492 mg/m <sup>3</sup> STEL: 400 ppm STEL: 984 mg/m <sup>3</sup>	TWA: 200 ppm STEL: 400 ppm	TWA: 200 ppm STEL: 400 ppm	TWA: 400 ppm TWA: 985 mg/m <sup>3</sup> STEL: 500 ppm STEL: 1230 mg/m <sup>3</sup>
Methyl alcohol 67-56-1	TWA: 200 ppm TWA: 262 mg/m <sup>3</sup> STEL: 250 ppm STEL: 328 mg/m <sup>3</sup>	TWA: 200 ppm STEL: 250 ppm	TWA: 200 ppm STEL: 250 ppm Skin	TWA: 200 ppm TWA: 262 mg/m <sup>3</sup> STEL: 250 ppm STEL: 328 mg/m <sup>3</sup>

### Appropriate engineering controls

#### **Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

#### **Eye/face protection**

Face protection shield.

#### **Hand protection**

Wear suitable gloves. Impervious gloves.

#### **Skin and body protection**

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Antistatic boots.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	clear
<b>Color</b>	No information available
<b>Odor</b>	Aromatic
<b>Odor threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	2.9	
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	76.1 °C / 168.98 176.900013818741 °F	
<b>Flash point</b>	20.61 °C / 69.1 °F	
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	
<b>Vapor density</b>	No data available	
<b>Relative density</b>	0.830 - 0.860	
<b>Water solubility</b>	No data available	None known
<b>Solubility in other solvents</b>	No data available	
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Hyphen</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

### Other information

<b>Explosive properties</b>	No information available.
<b>Oxidizing properties</b>	No information available.
<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Liquid Density</b>	No information available
<b>Bulk density</b>	No information available

## 10. Stability and reactivity

**Reactivity** No information available.

**Chemical stability** Stable under normal conditions.

<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	Heat, flames and sparks. Exposure to air or moisture over prolonged periods.
<b>Incompatible materials</b>	Oxidizing agent. Acids. Bases.
<b>Hazardous decomposition products</b>	Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Thermal decomposition can lead to release of irritating gases and vapors.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May be harmful if inhaled.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. May cause irritation. May be harmful in contact with skin.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Symptoms</b>	Redness. Burning. May cause blindness. Coughing and/ or wheezing.
-----------------	---

### Acute toxicity

#### Numerical measures of toxicity

#### The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	1,914.20 mg/kg
<b>ATEmix (dermal)</b>	2,558.30 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	11.23 mg/l
<b>ATEmix (inhalation-vapor)</b>	134.36 mg/l

<b>Unknown acute toxicity</b>	92 % of the mixture consists of ingredient(s) of unknown toxicity
	0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
	0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
	92 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
	88.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
	0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Product Information

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
---------------	-----------	-------------	-----------------

Ethyl alcohol 64-17-5	= 7060 mg/kg ( Rat )	-	= 124.7 mg/L ( Rat ) 4 h
Acetic acid 64-19-7	= 3310 mg/kg ( Rat )	= 1060 mg/kg ( Rabbit )	= 11.4 mg/L ( Rat ) 4 h
Water 7732-18-5	> 90 mL/kg ( Rat )	-	-
Isopropyl alcohol 67-63-0	= 1870 mg/kg ( Rat )	= 4059 mg/kg ( Rabbit )	= 72600 mg/m <sup>3</sup> ( Rat ) 4 h
Methyl alcohol 67-56-1	= 6200 mg/kg ( Rat )	= 15840 mg/kg ( Rabbit ) = 15800 mg/kg ( Rabbit )	= 64000 ppm ( Rat ) 4 h = 22500 ppm ( Rat ) 8 h

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	May cause skin irritation.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Ethyl alcohol 64-17-5	-	Group 1	Known	X
Isopropyl alcohol 67-63-0	-	Group 3	-	X

#### Legend

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

Group 1 - Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

##### **NTP (National Toxicology Program)**

Known - Known Carcinogen

##### **OSHA (Occupational Safety and Health Administration of the US Department of Labor)**

X - Present

<b>Reproductive toxicity</b>	No information available.
<b>Developmental toxicity</b>	Substances known to cause developmental toxicity in humans.
<b>Teratogenicity</b>	Teratogenic effects have occurred in humans.
<b>STOT - single exposure</b>	Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). Causes damage to organs if swallowed.
<b>STOT - repeated exposure</b>	No information available.
<b>Target organ effects</b>	Eyes, Blood, Liver, Kidney, spleen, Reproductive system, Respiratory system, Gastrointestinal tract (GI), Teeth, Skin, Central nervous system.
<b>Other adverse effects</b>	Tumorigenic effects have been reported in experimental animals. See actual entry in RTECS for complete information.
<b>Aspiration hazard</b>	No information available.

## 12. Ecological information



**Ecotoxicity** Toxic to aquatic life.

Product Information				
Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethyl alcohol 64-17-5	-	LC50: 12.0 - 16.0mL/L (96h, Oncorhynchus mykiss) LC50: >100mg/L (96h, Pimephales promelas) LC50: 13400 - 15100mg/L (96h, Pimephales promelas)	-	EC50: =2mg/L (48h, Daphnia magna) LC50: 9268 - 14221mg/L (48h, Daphnia magna) EC50: =10800mg/L (24h, Daphnia magna)
Acetic acid 64-19-7	-	LC50: =75mg/L (96h, Lepomis macrochirus) LC50: =79mg/L (96h, Pimephales promelas)	-	EC50: =65mg/L (48h, Daphnia magna) EC50: =47mg/L (24h, Daphnia magna)
Isopropyl alcohol 67-63-0	EC50: >1000mg/L (96h, Desmodesmus subspicatus) EC50: >1000mg/L (72h, Desmodesmus subspicatus)	LC50: =11130mg/L (96h, Pimephales promelas) LC50: =9640mg/L (96h, Pimephales promelas) LC50: >1400000µg/L (96h, Lepomis macrochirus)	-	EC50: =13299mg/L (48h, Daphnia magna)
Methyl alcohol 67-56-1	-	LC50: 19500 - 20700mg/L (96h, Oncorhynchus mykiss) LC50: 13500 - 17600mg/L (96h, Lepomis macrochirus) LC50: 18 - 20mL/L (96h, Oncorhynchus mykiss) LC50: =28200mg/L (96h, Pimephales promelas) LC50: >100mg/L (96h, Pimephales promelas)	-	-

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

#### Component Information

Chemical name	Partition coefficient
Ethyl alcohol 64-17-5	-0.32
Acetic acid 64-19-7	-0.31
Isopropyl alcohol 67-63-0	0.05
Methyl alcohol 67-56-1	-0.77

#### Mobility

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Waste treatment methods

<b>Waste from residues/unused products</b>	Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

## 14. Transport information

### TDG

UN/ID no	UN1170
Proper shipping name	ETHANOL SOLUTION
Hazard class	3
Packing group	II

### DOT

UN/ID no	UN1170
Proper shipping name	ETHANOL SOLUTION
Hazard class	3
Packing group	II

### MEX

Not regulated

### ICAO (air)

Not regulated

### IATA

UN number or ID number	UN1170
UN proper shipping name	ETHANOL SOLUTION
Transport hazard class(es)	3
Packing group	II

### IMDG

UN number or ID number	UN1170
UN proper shipping name	ETHANOL SOLUTION
Transport hazard class(es)	3
Packing group	II

### RID

Not regulated

### ADR

UN number or ID number	UN1170
UN proper shipping name	ETHANOL SOLUTION
Transport hazard class(es)	3
Packing group	II

### ADN

Not regulated

## 15. Regulatory information

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

#### International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

#### International Inventories

<b>TSCA</b>	Contact supplier for inventory compliance status.
<b>DSL/NDSL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.
<b>AICS</b>	Contact supplier for inventory compliance status.

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**16. Other information**

<b>NFPA</b>	<b>Health hazards</b> 3	<b>Flammability</b> 3	<b>Instability</b> 0	<b>Physical and chemical properties</b> -
<b>HMIS</b>	<b>Health hazards</b> 3 *	<b>Flammability</b> 3	<b>Physical hazards</b> 0	<b>Personal protection</b> X
Chronic Hazard Star Legend		* = Chronic Health Hazard		

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

<b>Issuing Date</b>	01-Aug-2014
<b>Revision date</b>	01-Nov-2023
<b>Revision Note</b>	No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**