

# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) and Canadian  
Workplace Hazardous Material Information System (WHMIS 2015)

Revision date 10-Dec-2024

Revision Number 1

## 1. Identification

### Product identifier

<b>Product Catalog Number:</b>	<b>Product Description:</b>
40-4450-XX	DCM:Anhydrous Acetonitrile (3:1)

### Product Code(s)

40-4450-XX

### Product Name

DCM:Anhydrous Acetonitrile (3:1)

### Other means of identification

UN number or ID number UN1993

Synonyms None

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

Recommended use For research use only

Restrictions on use Not for human diagnostic use

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

#### Manufacturer Address

Glen Research LLC  
22825 Davis Drive  
Sterling, VA 20164 USA

#### Emergency telephone number

Company Phone Number 1-703-437-6191

#### Emergency Telephone

CHEMTREC Customer Number (CCN): 234802 Glen Research Corporation  
US: 1-800-424-9300 or Local: +1-703-527-3887  
EMEA: +44 20 3885 0382  
APAC: +65 3163 8374

#### Website

www.glenresearch.com

#### E-mail address

support@glenresearch.com

## 2. Hazard(s) identification

### Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 1B
Flammable liquids	Category 2

**Appearance** Clear Liquid**Physical state** Liquid**Odor** Pungent Sweet Ether-like odor**Label elements****Signal word**

Danger

**Hazard statements**

Harmful if swallowed

Harmful in contact with skin

Harmful if inhaled

Causes serious eye irritation

May cause cancer

Highly flammable liquid and vapor

**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves, protective clothing, eye protection and face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Avoid breathing dust, fume, gas, mist, vapors and spray

Use only outdoors or in a well-ventilated area

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container tightly closed

Ground and bond container and receiving equipment

Use explosion-proof electrical, ventilating, lighting and .? equipment

Use only non-sparking tools

Take action to prevent static discharges

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

**Eyes**

IF IN EYES: 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 and attention

**Skin**

Call a POISON CENTER or doctor if you feel unwell

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water and then shower

Wash contaminated clothing before reuse

**Inhalation**

IF INHALED: Remove person to fresh air and keep comfortable for breathing

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

**Fire**In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish**Precautionary Statements - Storage**

Store locked up

Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

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Dispose of contents and container to an approved waste disposal plant

**Other information**

No information available.

**Unknown acute toxicity**

75 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

### 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)
Dichloromethane	75-09-2	70-90	-	-
Acetonitrile	75-05-8	10-30	-	-

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

**Description of first aid measures**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
<b>Inhalation</b>	Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<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 medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Not an expected route of exposure. IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. Get medical 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 breathing vapors or mists.

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

<b>Symptoms</b>	Metabolism may release cyanide, which may result in headache, dizziness, weakness, collapse, unconsciousness, and possible death. May cause redness and tearing of the eyes. Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.
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**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Water spray. Alcohol resistant foam.
<b>Large Fire</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	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.
<b>Hazardous combustion products</b>	Hydrogen cyanide. Nitrogen oxides (NO <sub>x</sub> ). Carbon oxides. Hydrogen chloride.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	Yes.
<b>Special protective equipment and precautions for fire-fighters</b>	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

<b>Personal precautions</b>	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. Avoid breathing vapors or mists.
<b>Other information</b>	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.

### Methods and material for containment and cleaning up

<b>Methods for containment</b>	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.
<b>Methods for cleaning up</b>	Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.
<b>Reference to other sections</b>	See section 8 for more information. See section 13 for more information.

## 7. Handling and storage

### Precautions for safe handling

<b>Advice on safe handling</b>	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
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and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. 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. Do not eat, drink or smoke when using this product. In case of insufficient ventilation, wear suitable respiratory equipment.

### **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. Keep out of the reach of children. Store locked up.

#### **Packaging materials**

Glass.

## **8. Exposure controls/personal protection**

### **Control parameters**

#### **Exposure Limits**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	
Dichloromethane 75-09-2	TWA: 50 ppm	TWA: 25 ppm (vacated) TWA: 500 ppm (vacated) STEL: 2000 ppm 5 min in any 3 h (vacated) Ceiling: 1000 ppm STEL: 125 ppm see 29 CFR 1910.1052	IDLH: 2300 ppm	
Acetonitrile 75-05-8	TWA: 20 ppm S*	TWA: 40 ppm TWA: 70 mg/m <sup>3</sup> (vacated) TWA: 40 ppm (vacated) TWA: 70 mg/m <sup>3</sup> (vacated) STEL: 60 ppm (vacated) STEL: 105 mg/m <sup>3</sup> S* as CN	IDLH: 137 ppm TWA: 20 ppm TWA: 34 mg/m <sup>3</sup>	
Chemical name	Alberta	British Columbia	Ontario	Quebec
Dichloromethane 75-09-2	TWA: 50 ppm TWA: 174 mg/m <sup>3</sup>	TWA: 25 ppm	TWA: 50 ppm	TWA: 50 ppm TWA: 174 mg/m <sup>3</sup>
Acetonitrile 75-05-8	TWA: 20 ppm TWA: 34 mg/m <sup>3</sup>	TWA: 20 ppm Skin	TWA: 20 ppm Skin	TWA: 20 ppm Ceiling: 10 ppm Ceiling: 11 mg/m <sup>3</sup> Skin

#### **Biological occupational exposure limits**

Chemical name	ACGIH
Dichloromethane 75-09-2	0.3 mg/L - urine (Dichloromethane) - end of shift

### **Appropriate engineering controls**

#### **Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

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

<b>Eye/face protection</b>	Tight sealing safety goggles.
<b>Hand protection</b>	Contact glove manufacturer for recommendations. Wear suitable gloves. Impervious gloves.
<b>Skin and body protection</b>	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Environmental exposure controls</b>	Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.
<b>General hygiene considerations</b>	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. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Handle in accordance with good industrial hygiene and safety practice. Take off contaminated clothing and wash before reuse.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	Clear Liquid
<b>Color</b>	Clear
<b>Odor</b>	Pungent Sweet Ether-like odor
<b>Odor threshold</b>	170 ppm

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	No data available	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Initial boiling point and boiling range</b>	No data available	None known
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability</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	None known
<b>Relative vapor density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility in other solvents</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b><u>Other information</u></b>		
<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	

VOC content	No information available
Liquid Density	No information available
Bulk density	No information available

## 10. Stability and reactivity

Reactivity	No information available
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks. Excessive heat.
Incompatible materials	Alkali metals. Strong oxidizing agents.
Hazardous decomposition products	Hydrogen cyanide. Nitrogen oxides (NOx). Carbon oxides.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation. May be absorbed through the skin in harmful amounts. Harmful in contact with skin. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

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

Symptoms	Metabolism may release cyanide, which may result in headache, dizziness, weakness, collapse, unconsciousness, and possible death. May cause redness and tearing of the eyes. Coughing and/ or wheezing.
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### Acute toxicity

#### Numerical measures of toxicity

No information available

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

ATEmix (oral)	1,144.20 mg/kg
ATEmix (dermal)	1,660.40 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-dust/mist)	79.50 mg/l
ATEmix (inhalation-vapor)	11.00 mg/l

#### Unknown acute toxicity

75 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
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Dichloromethane 75-09-2	= 1600 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	= 53 mg/L ( Rat ) 6 h
Acetonitrile 75-05-8	617 mg/kg (mouse)	> 2000 mg/kg ( Rabbit )	= 26.8 mg/L ( Rat ) 4 h

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

**Skin corrosion/irritation** May cause skin irritation.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes serious eye irritation.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

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

Chemical name	ACGIH	IARC	NTP	OSHA
Dichloromethane 75-09-2	A3	Group 2A	Reasonably Anticipated	X

#### Legend

**ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

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

Group 2A - Probably Carcinogenic to Humans

**NTP (National Toxicology Program)**

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

**Occupational Safety and Health Administration of the US Department of Labor**

X - Present

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

## 12. Ecological information

#### Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Dichloromethane 75-09-2	EC50: >500mg/L (96h, Pseudokirchneriella subcapitata) EC50: >500mg/L (72h, Pseudokirchneriella subcapitata)	LC50: 140.8 - 277.8mg/L (96h, Pimephales promelas) LC50: 262 - 855mg/L (96h, Pimephales promelas) LC50: =193mg/L (96h,	-	EC50: 1532 - 1847mg/L (48h, Daphnia magna) EC50: =190mg/L (48h, Daphnia magna)



Acetonitrile 75-05-8	-	Lepomis macrochirus) LC50: 1600 - 1690mg/L (96h, Pimephales promelas) LC50: =1000mg/L (96h, Pimephales promelas) LC50: =1850mg/L (96h, Lepomis macrochirus) LC50: =1650mg/L (96h, Poecilia reticulata)	-	-
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**Persistence and degradability** No information available.

**Bioaccumulation** Not likely to bioaccumulate.

**Bioconcentration factor (BCF)** log Pow <= 4

#### Component Information

Chemical name	Partition coefficient
Dichloromethane 75-09-2	1.25
Acetonitrile 75-05-8	-0.34

**Mobility in soil** Not expected to adsorb on soil.

**Mobility** Soluble in water.

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Disposal methods

**Waste from residues/unused products** Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

**California waste information** This product contains one or more substances that are listed with the State of California as a hazardous waste.

### 14. Transport information

#### DOT

UN number or ID number	Regulated UN1993
Proper shipping name	Flammable liquids, n.o.s.
Transport hazard class(es)	Class 3
Packing group	Packing Group II
Reportable quantity - lbs	5000 lbs

#### IATA

Regulated

**UN number or ID number** UN1993  
**UN proper shipping name** Flammable liquid, n.o.s.  
**Transport hazard class(es)** Class 3  
**Packing group** Packing Group II

**IMDG** Regulated  
**UN number or ID number** UN1993  
**UN proper shipping name** Flammable liquid, n.o.s.  
**Transport hazard class(es)** Class 3  
**Packing group** Packing Group II  
**EmS-No.** F-E, S-E

## 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

**TSCA** All of the components of this product are listed in the TSCA Inventory or exempt.

This product contains a TSCA Section 6 restricted substance(s). Please see listed references to understand requirements and obligations under TSCA. Not all products containing restricted substances will necessarily be restricted.

Chemical name	CAS No.	References
Dichloromethane	75-09-2	See 40 CFR Part 751

**DSL/NDSL** Listed or exempt.  
**EINECS/ELINCS** Listed or exempt.  
**ENCS** Listed or exempt.  
**IECSC** Listed or exempt.  
**KECI** Listed or exempt.  
**PICCS** Listed or exempt.  
**AIIC** Listed or exempt.

#### **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

**AIIC** - Australian Inventory of Industrial Chemicals

#### US Federal Regulations

##### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Dichloromethane - 75-09-2	0.1
Acetonitrile - 75-05-8	1.0

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Dichloromethane 75-09-2	-	X	X	-
Acetonitrile 75-05-8	-	X	X	-

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Dichloromethane 75-09-2	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ
Acetonitrile 75-05-8	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Dichloromethane - 75-09-2	Carcinogen

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Acetonitrile 75-05-8	X	X	X
Dichloromethane 75-09-2	X	X	X

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other information**

<b>NFPA</b>	<b>Health hazards</b> 2	<b>Flammability</b> 3	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 2 *	<b>Flammability</b> 3	<b>Physical hazards</b> 0	<b>Personal protection</b> X

**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)  
Ceiling Maximum limit value

STEL  
Sk\*

STEL (Short Term Exposure Limit)  
Skin designation

Revision date 10-Dec-2024

Revision Note No information available

Disclaimer

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**End of Safety Data Sheet**