

SAFETY DATA SHEET

Preparation Date: 12/02/2014

Revision Date: Not Applicable

Revision Number: Not Applicable

Product identifier

Product code: D1578
Product Name: cis-2,6-Dimethylmorpholine

Other means of identification

Synonyms: No information available
CAS #: 6485-55-8
RTECS # Not available
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Dermal	Category 3
Serious eye damage/eye irritation	Category 1
Flammable liquids	Category 3

Label elements

Danger

Hazard statements

Toxic in contact with skin
Causes serious eye damage
Flammable liquid and vapor



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wear protective gloves/protective clothing/eye protection/face protection
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/./? /equipment
Use only non-sparking tools
Take precautionary measures against static discharge

In case of fire: Use CO₂, dry chemical, or foam to extinguish.

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

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

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
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3. COMPOSITION/INFORMATION ON INGREDIENTS

cis-2,6-Dimethylmorpholine 6485-55-8	6485-55-8	100	*
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4. FIRST AID MEASURES

First aid measures

General Advice:

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact:

Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately. Toxic in contact with skin.

Eye Contact:

Flush eye with water for 15 minutes. Get medical attention.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms

Causes eye irritation. Eye contact may result in redness or pain. Toxic in contact with skin.

Indication of any immediate medical attention and special treatment needed

Notes to Physician:

Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

Carbon dioxide (CO₂). Dry chemical. Water spray.

Unsuitable Extinguishing Media:

Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous Combustion Products:

Carbon oxides; Nitrogen oxides

Specific hazards:

Flammable
May be ignited by heat, sparks or flames
Container explosion may occur under fire conditions or when heated
Vapor may travel considerable distance to source of ignition and flash back
Vapors may form explosive mixtures with air
Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks)

Special Protective Actions for Firefighters

Specific Methods:

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out. Dike fire-control water for later disposal; do not scatter the material.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice:

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Keep away from heat and sources of ignition. Air sensitive. Store under inert gas.

Incompatible Materials:

Strong oxidizing agents. Strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
cis-2,6-Dimethylmorpholine 6485-55-8	None	None	None	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
cis-2,6-Dimethylmorpholine 6485-55-8	None	None	None	None

Australia and Mexico

Components	Australia	Mexico
cis-2,6-Dimethylmorpholine 6485-55-8	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles. Safety glasses with side-shields.

Skin and body protection: Long sleeved clothing. Chemical resistant apron. Gloves.

Respiratory protection: Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid	Appearance: Liquid.	Color: Colorless. Pale Yellow.
Odor: No information available	Taste No information available	Molecular/Formula weight: 115.18
Formula: C6H13NO	Flammability: No information available	Flash point (°C): No data available
Flashpoint (°C/°F): 43°C/109°F	Flash Point Tested according to: Not available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Autoignition Temperature (°C/°F): No information available	pH: No information available
Melting point/range(°C/°F): No information available	Boiling point/range(°C/°F): 147°C/297°F	Decomposition temperature(°C/°F): No information available
Bulk density: No information available	Specific gravity: No information available	Vapor pressure @ 20°C (kPa): No information available
Density (g/cm3): 0.93	Evaporation rate: No information available	Vapor density: No information available
VOC content (g/L): No information available	Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available
Viscosity: No information available	Miscibility: No information available	Solubility: No information available

10. STABILITY AND REACTIVITY

Reactivity

Reactive with strong acids
Reactive with oxidizing agents

Chemical stability

Stability: Sensitive to air.

Possibility of Hazardous Reactions: In use, may form flammable/explosive vapor-air mixture

Conditions to avoid: Heat. Ignition sources. Incompatible materials. Exposure to air.

Incompatible Materials: Strong oxidizing agents. Strong acids.

Hazardous decomposition products: Carbon oxides. Nitrogen oxides (NOx).

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Eyes. Ingestion. Inhalation. Skin.

Acute Toxicity

Component Information

cis-2,6-Dimethylmorpholine - 6485-55-8

- LD50/oral/rat** = = 1270 mg/kg Oral LD50 Rat
- LD50/oral/mouse** = No information available
- LD50/dermal/rat** = No information available
- LD50/dermal/rabbit** = No information available
- LC50/inhalation/rat** = No information available
- LC50/inhalation/mouse** = No information available
- Other LD50 or LC50 information** = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

- Skin Contact:** Toxic in contact with skin.
- Eye Contact:** Causes serious eye irritation.
- Inhalation** May cause irritation of respiratory tract.
- Ingestion** Health injuries are not known or expected under normal use.
- Aspiration hazard** No information available

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

Chronic Toxicity No information available

Sensitization: No information available

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic

Components	ACGIH - Carcinogens	IARC	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
cis-2,6-Dimethylmorpholine	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available
STOT - repeated exposure No information available
Target Organs: No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

cis-2,6-Dimethylmorpholine - 6485-55-8

Freshwater Algae Data: 96.9 mg/L EC50 *Desmodesmus subspicatus* 72 h

Freshwater Fish Species Data: 387 mg/L LC50 *Pimephales promelas* 96 h 1
387 mg/L LC50 *Pimephales promelas* 96 h static 1

Water Flea Data: 187 mg/L EC50 *Daphnia magna* 48 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
cis-2,6-Dimethylmorpholine	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN1992
Proper Shipping Name: Flammable liquids, toxic, n.o.s. (cis-2,6-Dimethylmorpholine)
Hazard Class: 3
Subsidiary Risk: 6.1
Packing Group: III
ERG No: 131
Marine Pollutant: No data available
DOT RQ (lbs): No information available
Symbol(s): G

TDG (Canada)

UN-No: UN1992
Proper Shipping Name: Flammable liquid, toxic, n.o.s.
Hazard Class: 3
Subsidiary Risk: (6.1)
Packing Group: III
Description: No information available

ADR

UN-No: UN1992
Proper Shipping Name: Flammable liquid, toxic, n.o.s.
Hazard Class: 3
Packing Group: III
Subsidiary Risk: 6.1
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: UN1992
Proper Shipping Name: Flammable liquid, toxic, n.o.s.
Hazard Class: 3
Subsidiary Risk: 6.1
Packing Group: III
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-E
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN1992
Proper Shipping Name: Flammable liquid, toxic, n.o.s.
Hazard Class: 3
Subsidiary Risk: 6.1
Packing Group: III
Classification Code: No information available

14. TRANSPORT INFORMATION

Description: No information available

ICAO

UN-No: UN1992
Proper Shipping Name: Flammable liquid, toxic, n.o.s.
Hazard Class: 3
Subsidiary Risk: 6.1
Packing Group: III
Description: No information available

IATA

UN-No: UN1992
Proper Shipping Name: Flammable liquid, toxic, n.o.s.
Hazard Class: 3
Subsidiary Risk: 6.1
Packing Group: III
ERG Code: 3P
Description: No information available

15. REGULATORY INFORMATION**International Inventories**

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>cis-2,6-Dimethylmorpholine</i>	Not Listed	Not present	Not present	Not present	Not present	Not present	Present 229-353-0

U.S. Regulations**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.****Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>cis-2,6-Dimethylmorpholine</i>	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
<i>cis-2,6-Dimethylmorpholine</i>	None	None	None	None	None

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
<i>cis-2,6-Dimethylmorpholine</i>	Not Applicable	Not Applicable

Canada

Product code: D1578

Product name: *cis-2,6-Dimethylmorpholine*

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WHMIS hazard class:

E Corrosive material
 B2 Flammable liquid
 D1B Toxic materials

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

Components	Canada (DSL)	Canada (NDSL)
cis-2,6-Dimethylmorpholine	Not Listed	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
cis-2,6-Dimethylmorpholine	Not listed	Not listed

EU Classification**R-phrase(s)**

not determined (not applicable)

S -phrase(s)

none

Components	Classification	Concentration Limits:	Safety Phrases
cis-2,6-Dimethylmorpholine		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

None.

16. OTHER INFORMATION

16. OTHER INFORMATION

Preparation Date: 12/02/2014
Revision Date: Not Applicable
Prepared by: Sonia Owen

Disclaimer: All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet