

Mixgran[®] DTDM 80

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION	
Manufacturer: Shandong Yanggu Huatai Chemical Co., LTD No.217, Qinghexi Road Yanggu County, Shandong, China 252300	Emergency Contact: Chemtrec: 1-800-424-9300 (USA) (1)330-542-8400 (outside USA)
Trade Name(s): Mixgran DTDM 80	Chemical Name: 4,4'-Dithiodimorpholine
Relevant identified uses of the substance or mixture and uses advised against: None determined.	Application of the substance/the preparation: Crosslinking agent.
Issued By: Sovereign Chemical Company According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS	Date of Issue: April 15, 2024

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
 Information in accordance with US 29 CFR 1910.1200 (Hazcom 2012) and Regulation (EC) No 1272/2008

Skin Sens. Category 1	H317
STOT Category 3	H335
Aquatic, Chronic Category 2	H411

Label elements
 The following Hazard Statements are applicable to EU regulations and US GHS regulations:
 The product is additionally classified and labelled according to the Globally Harmonized System (GHS) within the United States.
 The substance is classified and labeled according to the CLP regulation.
 Hazard pictograms



Signal word: Warning
 Hazard statements

H317 - May cause an allergic skin reaction
 H335 - May cause respiratory irritation
 H411 - Toxic to aquatic life with long lasting effects

Precautionary Statement:
 P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
 P501: Dispose of contents/container to local/regional/national/ international regulation.

Other hazards: Not available (PBT, vPvB, Substance is an endocrine disruptor etc.)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	CAS No	EC No	Weight %	Classification
4,4'-dithiodimorpholine	103-34-4	203-103-0	80%	Skin Sens. 1 (H317) STOT Single Exp. 3 (H335) Aquatic Chronic 2 (H411)
Ethylene propylene terpolymer	N/A	N/A	20%	N/A

The remaining unspecified ingredients are impurities and are not hazardous.

4. FIRST AID MEASURES

Description of first aid measures: In all cases of doubt, or when symptoms persist, seek medical attention.

In case of inhalation: Remove from exposure and move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

In case of skin contact: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

In case of eyes contact: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid if irritation persists.

In case of ingestion: Rinse mouth and drink plenty of water. Do not induce vomiting. Get medical aid.

Most important symptoms and effects, both acute and delayed May cause an allergic skin reaction. Causes serious eye irritation.

Indication of any immediate medical attention and special treatment needed If skin irritation or rash occurs, get medical advice/attention.

5. FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Water spray, foam, powder, carbon dioxide.

Unsuitable extinguishing media: Not available.

Special hazards arising from the substance or mixture

Hazardous decompositions products: carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides.

Advice for fire-fighters: Wear a self-contained breathing apparatus in pressure-demand MSHA/ NIOSH (approved or equivalent), and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Avoid contact with skin and eyes.

For emergency responders: Wear an appropriate NIOSH/MSHA approved respirator if mist, vapor or dust is generated.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for Containment and Cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. Flush area with water.

Reference to other sections: See Section 7 for information on safe handling. See section 8 for information on personal protection equipment. See Section 13 for information on disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Protective measures: Use personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust. Provide appropriate exhaust ventilation at places where dust is formed. Wash hands thoroughly after handling.

Advice on general occupational hygiene: Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities: Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use.

Specific end use(s): Not applicable.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

Control parameters

Occupational exposure limits: Not available.

Additional exposure limits under the conditions of use: Not available.

DNEL/DMEL and PNEC-Values: Not available.

Exposure controls

Appropriate engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Tightly sealed goggles.

Hand protection: Type of gloves recommended: nitrile rubber. Minimum breakthrough time / gloves: 480 min; Minimum thickness / gloves: 0.11 mm.

Body protection: Wear appropriate protective clothing and boots.

Respiratory protection: Wear dust-protection mask if there is a risk of dust formation.

Thermal hazards: Wear suitable protective clothing to prevent heat.

Environmental exposure controls:

Avoid discharge into the environment. According to local regulations, Federal and official regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Form: Granule Color: Gray	Change in Condition Melting Point/Melting Range: 136.06 °C Boiling Point/Boiling Range: 248.6 °C
Odor: Not determined.	Octanol/Water Partition Coefficient: 2.25 (30 °C)
Odor threshold: Not determined	Solvent Content: Organic solvents: Not determined
pH: Not applicable	Solids content: Not determined
Vapor Pressure: Not applicable	Flash point: Not applicable
Density at 20 °C: Not applicable.	Flammability (solid, gaseous): Not determined.
Relative density: 1.319	Ignition temperature: Not determined
Vapor Density: Not applicable	Decomposition temperature: Not determined
Evaporation rate Not applicable	Self-igniting: Product is not self-igniting.
Solubility in / Miscibility with water at 20 °C: Insoluble.	Danger of explosion: Product does not present an explosion hazard.
Viscosity Dynamic: Not applicable Kinematic: Not applicable	Explosion limits Lower: Not determined. Upper: Not determined

10. STABILITY AND REACTIVITY

Reactivity: The substance is stable under normal storage and handling conditions.

Chemical stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Possibility of hazardous reactions: No dangerous reactions known.

Conditions to avoid: Incompatible materials. Keep away from heat and direct sunlight.

Incompatible materials: Strong oxidizing agents.

Hazardous decomposition products: Carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Toxicokinetic, metabolism and distribution

Non-human toxicological data: Not available

Information on toxicological effects

Acute toxicity:

LD50(Oral, Rat): > 2000 mg/kg bw

LD50(Dermal, Rat): > 2000 mg/kg bw

LC50(Inhalation, Rat): Not available

Skin corrosion/Irritation: Not classified.

Serious eye damage/irritation: Causes serious eye irritation.

Respiratory or skin sensitization: May cause an allergic skin reaction.

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

STOT- single exposure: Not classified

STOT-repeated exposure: Not classified

Aspiration hazard: Not classified

12. ECOLOGICAL INFORMATION

Toxicity

Acute toxicity	Time	Species	Method	Evaluation	Remarks
LC50	96h	Fish	OECD 203	N/A	N/A
EC50	48h	Daphnia	OECD 202	N/A	N/A
EC50	72h	Algae	OECD 201	N/A	N/A

Persistence and degradability: Not available.

Bioaccumulative potential: Not available.

Mobility in soil: Not available.

Results of PBT&vPvB assessment: Not available.

Other adverse effects: Not available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Product / Packaging disposal

If empty container retains product residues, all label precautions must be observed. Return for reuse or dispose according to national or local regulations.

14. TRANSPORTATION INFORMATION

UN-Number	
DOT	N/A
ADR, ADN, IMDG, IATA	3077
UN proper shipping name	
DOT	N/A
ADR, ADN, IMDG, IATA	Environmentally hazardous substance, solid, n.o.s. (Contains 4,4'-Dithiodimorpholineransport hazard class(es))
DOT	N/A
ADR, ADN, IMDG, IATA Class	9
Packing group	
DOT	N/A
ADR, IMDG, IATA	III
Environmental hazards	Environmentally hazardous substance, solid, n.o.s. (Contains 4,4'-Dithiodimorpholineransport hazard class(es))
Marine pollutant	N.O.S.
Special precautions for user	See Section 2
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	IBC08

15. REGULATORY INFORMATION

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

United States (USA)	
SARA Section 355 (extremely hazardous substances)	Substance is not listed.
SARA Section 313 (Specific toxic chemical listings)	Substance is not listed.
TSCA (Toxic Substances Control Act)	Substance is listed.
Proposition 65 (California)	
Chemicals known to cause cancer	Substance is not listed.
Chemicals known to cause reproductive toxicity for females	Substance is not listed.

Chemicals known to cause reproductive toxicity for males	Substance is not listed.
Chemicals known to cause developmental toxicity	Substance is not listed.
Carcinogenic Categories	
EPA (Environmental Protection Agency)	Substance is not listed.
IARC (International Agency for Research on Cancer)	Substance is not listed.
TLV (Threshold Limit Value established by ACGIH)	Substance is not listed.
NIOSH-Ca (National Institute for Occupational Safety and Health)	Substance is not listed.
OSHA-Ca (Occupational Safety & Health Administration)	Substance is not listed.
Canada	
Canadian Domestic Substances List (DSL)	Substance is listed.
Canadian Ingredient Disclosure list (limit 0.1%)	Substance is not listed.
Canadian Ingredient Disclosure list (limit 1%)	Substance is not listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.