

# Sovchem<sup>®</sup> MBS

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION	
<b>Manufacturer</b> Sovereign Chemical Company 4040 Embassy Parkway, Suite 190 Akron, OH 44333	<b>Emergency Contact</b> Chemtrec: 1-800-424-9300 (USA) (1)330-542-8400 (outside USA)
<b>Trade Name(s):</b> Sovchem <sup>®</sup> MBS Granule	<b>Synonyms:</b> Morpholine, 4-(2-benzothiazolythio), N-oxydiethylene-2-benzothiazylsulfenamide, (2-Morpholinothio) benzothiazole, MOR, MBS
<b>Chemical Name:</b> 2-(4-Morpholinyl) mercaptobenzothiazole	<b>CAS Number:</b> 102-77-2
<b>Relevant identified uses of the substance or mixture and uses advised against:</b> No further relevant information available.	<b>Application of the substance/the preparation:</b> Additive for polymers.
<b>Issued By:</b> Sovereign Chemical Company  According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS	<b>Date of Issue:</b> November 1, 2018

## 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008:

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation:  
 H411



Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

GHS09 Environment



Skin Irrit. 2 H315 Causes skin irritation.  
 Eye Irrit. 2 H319 Causes serious eye irritation.  
 Skin Sens. 1 H317 May cause an allergic skin reaction.

GHS07

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xi; Irritant  
 R36/38 Irritating to eyes and skin.



X1; sensitizing  
 R43 May cause sensitization by skin contact.



N; Dangerous for the environment  
 R51/53 Toxic to aquatic organisms; may cause long term adverse effects in the aquatic

Information concerning particular hazards for human and environment

The product has to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

## Classification system

The classification is according to the latest editions of the EU-lists, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

## 2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.

The product is classified and labeled according to the CLP regulation.

Hazard pictograms



This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS)



GHS07 GHS09

Signal word: Warning

Hazard-determining components of labeling

2-(morpholiniothio)benzothiazole  
benzothiazole-2-thiol

Hazard statements

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.

H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P280 Wear protective gloves and eye protection.  
P264 Wash thoroughly after handling.  
P261 Avoid breathing dust.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.

Additional information: Contains 2-(morpholiniothio)benzothiazole, benzothiazole-2-thiol. May produce an allergic reaction.

Hazard description

WHMIS-symbols



D2B –Toxic material causing other toxic effects

NFPA ratings (scale 0-4)



Health = 1  
Fire = 1  
Reactivity = 0

HMIS ratings (scale 0-4)

HEALTH	1
FIRE	1
REACTIVITY	0

Health = 1  
Fire = 1  
Reactivity = 0

HMIS Long Term Health Hazard Substances: None of the ingredients is listed.

2.3 Other hazards

Results of PBT and vPvB assessment













PBT: Not applicable.

vPvB: Not applicable.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components

CAS: 102-77-2 EINECS: 203-052-4 Index number: 613-113-00-0	2-(morpholinothio)benzothiazole  Xi R36/38;  Xi R43;  N R51/53  Aquatic Chronic 2, H411  Skin Irrit. 2, H315;  Eye Irrit. 2, H319;  Skin Sens. 1, H317	50-100%
CAS: 149-30-4 EINECS: 205-736-8 Index number: 613-108-00-3	benzothiazole-2-thiol  Xi R43;  N R50/53  Aquatic Acute 1, H400;  Aquatic Chronic 1, H410  Skin Sens. 1, H317	<10%

Additional information: For the wording of the listed risk phrases refer to section 16.

**4. FIRST AID MEASURES**

4.1 Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

After inhalation

Supply fresh air; consult doctor in case of complaints.

In case of irregular breathing or respiratory arrest provide artificial respiration.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

Coughing

Dizziness  
Gastric or intestinal disorders  
Breathing difficulty  
Disorientation  
Hazards: Danger of impaired breathing.

4.3 Indication of any immediate medical attention and special treatment needed  
If swallowed, gastric irrigation with added, activated carbon.  
Treat skin and mucous membrane with antihistamine and corticoid preparations.  
Monitor circulation.  
If necessary oxygen respiration treatment.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.  
For safety reasons, unsuitable extinguishing agents: None.

### 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

### 5.3 Advice for firefighters

#### Protective equipment

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information: Cool endangered receptacles with water fog or haze.

## 6. ACCIDENTAL RELEASE MEASURES

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

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

### 6.2 Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

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

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

Do not flush with water or aqueous cleansing agents.

### 6.4 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 disposal information.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Store in cool, dry place in tightly closed receptacles.  
Prevent formation of dust.  
Use only in well ventilated areas.  
Information about fire and explosion protection: Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles

Store in a cool location.

Avoid storage near extreme heat, ignition sources or open flame.

Protect from humidity and water.

Provide ventilation for receptacles.

Information about storage in one common storage facility

Do not store together with acids.

Store away from oxidizing agents.

Store away from foodstuffs.

Further information about storage conditions

Store in cool, dry conditions in well-sealed receptacles.

Store receptacle in a well-ventilated area.

Protect from humidity and water.

7.3 Specific end use(s) No further relevant information available.

**8. EXPOSURE CONTROLS - PERSONAL PROTECTION**

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace

149-30-4, benzothiazole-2-thiol

WEEL (USA)	5 mg/m <sup>3</sup> Skin; DSEN
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DNELs: No further relevant information available.

PNECs: No further relevant information available.

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection

Use suitable respiratory protective device in case of insufficient ventilation.

Use suitable respiratory protective device when high concentrations are present.

Protection of hands



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests, no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

Neoprene gloves

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection



Safety glasses

Body protection: Protective work clothing.

Limitation and supervision of exposure into the environment: No further relevant information available.

Risk management measures

See Section 7 for additional information.

No further relevant information available.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

9.1 Information on basic physical and chemical properties:

General Information

Appearance Form: Pellets. Color: Light Brown.	Change in Condition Melting Point/Melting Range: Undetermined. Boiling Point/Boiling Range: Undetermined.
Odor: Aromatic.	Octanol/Water Partition Coefficient: Not determined.
Odor threshold: Not determined.	pH value: Not applicable.
Vapor pressure: Not applicable.	Flash point: Not applicable.
Density at 20 °C: 1.36 g/cm <sup>3</sup> .	Flammability (solid, gaseous): Not determined.
Relative density Not determined.	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: 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.
Solvent content: Organic solvents: Not determined.	Solids Content: Not determined.

9.2 Other information: No further relevant information available.

**10. STABILITY AND REACTIVITY**

10.1 Reactivity

10.2 Chemical stability

Thermal decomposition / conditions to be avoided

No decomposition if used and stored according to specifications.  
Keep away from heat and direct sunlight.

10.3 Possibility of hazardous reactions

Reacts with strong oxidizing agents.  
Reacts with strong acids.  
Toxic fumes may be released if heated above the decomposition point.

10.4 Conditions to avoid

Keep away from heat and direct sunlight.  
Store away from oxidizing agents.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products

Carbon monoxide and carbon dioxide  
Sulfur dioxide  
Nitrogen oxides

**11. TOXICOLOGICAL INFORMATION**

11.1 Information on toxicological effects

Acute toxicity

LD/LC50 values relevant for classification:		
149-30-4 benzothiazole-2-thiol		
Oral	LD50	100 mg/kg (rat)
Dermal	LD50	>7940 mg/kg (rabbit)
102-77-2 2-(morpholinothio)benzothiazole		
Oral	LD50	3160 mg/kg (rat)

Primary irritant effect

On the skin: Irritant to skin and mucous membranes.  
On the eye: Irritating effect.  
Sensitization: Sensitization possible through skin contact.

Additional toxicological information: The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant  
Danger through skin adsorption.  
Toxic and/or corrosive effects may be delayed up to 12 hours.

Sensitization: Sensitization possible by inhalation and/or dermal contact.

Repeated dose toxicity: Repeated exposures may result in skin and/or respiratory sensitivity.

**12. ECOLOGICAL INFORMATION**

12.1 Toxicity

Aquatic toxicity: The material is harmful to the environment.

12.2 Persistence and degradability: Not easily biodegradable

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Ecotoxicological effects

Remark: Toxic for fish

Additional ecological information

General notes

The declarations are valid for the component with the highest toxicological risk.

Avoid transfer into the environment.

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment cannot be excluded.

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Also, poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

**13. DISPOSAL CONSIDERATIONS**

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Un-cleaned packaging

Recommendation: Disposal must be made according to official regulations.

**14. TRANSPORTATION INFORMATION**





14.1 UN-Number

DOT	Not regulated.
ADR, IMDG, IATA	UN3077

14.2 UN proper shipping name:

DOT	Not regulated.
ADR	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S (2-(morpholinothio) benzothiazole)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-(morpholinothio)benzothiazole,benzothiazole-2-thiol), MARINE POLLUTANT



IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID N.O.S. (2-(morpholiniothio)benzothiazole)
14.3 Transport hazard class(es)	
DOT, Class	Not regulated.
ADR	
 	
Class	9 (M7) Miscellaneous dangerous substances and articles.
Label	9
IMDG, IATA	
 	
Class	9 Miscellaneous dangerous substances and articles.
Label	9
14.4 Packing group	
DOT	N/A
ADR, IMDG, IATA	III
14.5 Environmental hazards	Product contains environmentally hazardous substances: benzothiazole-2-thiol, 2-(morpholiniothio) benzothiazole
Marine pollutant	Yes Symbol (fish and tree)
Special Marking (ADR)	Symbol (fish and tree)
Special Marking (IATA)	Symbol (fish and tree)
14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles
Danger code (Kemler)	90
EMS Number	F-A, S-F.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable.
Transport/Additional information	
ADR	
Limited quantities (LQ)	5 kg
Transport category	3
Tunnel restriction code	E
UN "Model Regulation"	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-(morpholiniothio) benzothiazole), 9, III

**15. REGULATORY INFORMATION**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
United States (USA)

SARA Section 355 (extremely hazardous substances)	None of the ingredients is listed.
SARA Section 313 (Specific toxic chemical listings)	149-30-4 benzothiazole-2-thiol
TSCA (Toxic Substances Control Act)	All ingredients are listed.
Proposition 65 (California)	
Chemicals known to cause cancer	None of the ingredients is listed.
Chemicals known to cause reproductive toxicity for females	None of the ingredients is listed.
Chemicals known to cause reproductive toxicity for males	None of the ingredients is listed.
Chemicals known to cause developmental toxicity	None of the ingredients is listed.
Carcinogenic Categories	
EPA (Environmental Protection Agency)	None of the ingredients is listed.
IARC (International Agency for Research on Cancer)	None of the ingredients is listed.
TLV (Threshold Limit Value established by ACGIH)	None of the ingredients is listed.
NIOSH-Ca (National Institute for Occupational Safety and Health)	None of the ingredients is listed.
OSHA-Ca (Occupational Safety & Health Administration)	None of the ingredients is listed.
Canada	
Canadian Domestic Substances List (DSL)	102-77-2 2-(morpholinothio)benzothiazole 149-30-4 benzothiazole-2-thiol
Canadian Ingredient Disclosure list (limit 0.1%)	None of the ingredients is listed.
Canadian Ingredient Disclosure list (limit 1%)	None of the ingredients is listed.

15.2 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.

Relevant Phrases

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.

H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
R36/38	Irritating to eyes and skin.
R43	May cause sensitization by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent