Safety Data Sheet

Oxoflex® ZMTI

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION	
Manufacturer Sovereign Chemical Company 4040 Embassy Parkway, Suite 190 Akron, OH 44333	Emergency Contact Chemtrec: 1-800-424-9300 (USA) (1)330-542-8400 (outside USA)
Trade Name(s): Oxoflex® ZMTI Powder	Chemical Name: Methyl-2-mercaptobenzimidazole, Zinc Salt
Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.	Application of the substance/the preparation: Rubber Compounding.
Issued By: Sovereign Chemical Company According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS	Date of Issue: November 1, 2021

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:
Information in accordance with US 29 CFR 1910.1200 (Hazcom 2012) and Regulation (EC) No 1272/2008
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.

GHS09 Environment
Aquatic Chronic 2 — H411 Toxic to aquatic life with long lasting effects

GHS07
Acute Tox.4 — H302 Harmful if swallowed.

Information concerning 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

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.
The product is classified and labeled according to the CLP regulation.

Hazard pictograms

GHS07 GHS09

Signal word: Warning

Hazard-determining components of labeling: 1,3-dihydro-4(or 5)-methyl-2H-benzimidazole-2-thione, zinc salt

Hazard statements

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

H302	Harmful if swallowed.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P273	Avoid release to the environment.
P264	Wash thoroughly after handling.
P270	Do not eat, drink, or smoke when using this product.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth.
P391	Collect spillage.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

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: 61617-00-3 EINECS: 262-872-0	1,3-dihydro-4(or 5)-methyl-2H-benzimidazole-2-thione, zinc salt Aquatic Chronic 2, H411 Acute Tox. 4, H302	50-100%

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: Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after the accident.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact

Clean with water and soap.

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
Nausea
Cramp
Dizziness
Thirst
Coughing
Hazards: No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed
Contains zinc salt. Consult literature for specific antidotes.
If swallowed, gastric irrigation with added, activated carbon.
Treat skin and mucous membrane with antihistamine and corticoid preparations.
In cases of irritation to the lungs, initial treatment with cortical steroid inhalants.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing agents
CO2, powder, or water spray. Fight larger fires with water spray or alcohol resistant foam.
For safety reasons, unsuitable extinguishing agents: None.

5.2 Special hazards arising from the substance or mixture
In case of fire, the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NOx)
Under certain fire conditions, traces of other toxic gases cannot be excluded.

5.3 Advice for firefighters
Protective equipment
Wear self-contained respiratory protective device.
Wear fully protective suit.
Additional information: Cool endangered receptacles with water spray.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.

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.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

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
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
Any unavoidable deposit of dust must be regularly removed.
Information about fire and explosion protection
Dust can combine with air to form an explosive mixture.
No special measures required.

7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles
Store in a cool location.
Protect from humidity and water.
Avoid storage near extreme heat, ignition sources or open flame.
Information about storage in one common storage facility
Store away from foodstuffs.
Do not store together with acids.
Store away from oxidizing agents.
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 Section 7.

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
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
Keep away from foodstuffs, beverages, and feed.
Wash hands before breaks and at the end of work.
Do not inhale dust / smoke / mist.
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
The glove material must 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
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 must be found out by the manufacturer of the protective gloves and must be observed.

Eye protection

Safety glasses

Body protection: Light weight protective 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: Powder. Color: Cream.	Change in Condition Melting Point/Melting Range: Undetermined. Boiling Point/Boiling Range: Undetermined.
Odor: Light	Octanol/Water Partition Coefficient: Not determined.
Odor threshold: Not determined.	pH: Not applicable.
Vapor Pressure: Not applicable.	Flash point: Not applicable
Density at 20 °C: 1.5 g/cm³.	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.

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.

10.3 Possibility of hazardous reactions
Reacts with strong acids.
Reacts with strong alkali.
Reacts with oxidizing agents.

10.4 Conditions to avoid: No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products
Carbon monoxide and carbon dioxide.
Toxic metal oxide smoke.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity

LD/LC50 values relevant for classification:		
61617-00-3 1,3-dihydro-4(or 5)-methyl-2H-benzimidazole-2-thione, zinc salt		
Oral	LD50	800 mg/kg (rat)

Primary irritant effect
On the skin: No irritant effect.
On the eye: No irritating effect.
Sensitization: No sensitizing effects known.
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:
Harmful.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bio-accumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.
Ecotoxic effects
Remark: Harmful to fish.
Additional ecological information
General notes

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to 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	N/A
ADR, IMDG, IATA	UN3077

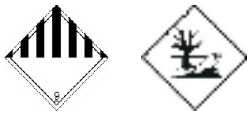
14.2 UN proper shipping name:

DOT	N/A
ADR	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S (1,3-dihydro-4(or 5)-methyl-2H-benzimidazole-2-thione, zinc salt)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,3-dihydro-4(or 5)-methyl-2Hbenzimidazole-2- thione, zinc salt), MARINE POLLUTANT
IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,3-dihydro-4(or 5)-methyl-2H-benzimidazole-2-thione, zinc salt)

14.3 Transport hazard class(es)

DOT Class	N/A

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

Marine pollutant	No 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. (1,3-dihydro-4(or 5)-methyl-2H-benzimidazole-2-thione, zinc salt), 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)	Zinc compound.
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)	All ingredients are listed.
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.

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 Labeling 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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent