Safety Data Sheet

Sovchem® ZMBT 15

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): Sovchem® ZMBT Powder	Chemical Name: Zinc 2-mercaptobenzothiazole
Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.	Application of the substance/the preparation: Used as vulcanization accelerator in rubber goods manufacture.
Issued By: Sovereign Chemical Company 4040 Embassy Parkway, Suite 190 Akron, Ohio 44333	Date of Issue: June 1, 2026

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Information in accordance with US 29 CFR 1910.1200 (Hazcom 2012), Regulation (EC) No 1272/2008, 1907/2006/EC (REACH), and GHS.

Hazard Pictograms (CLP)	:	 GHS07,  GHS09
Signal Word	:	Warning
Hazard statements (CLP)	:	H317 – May cause an allergic skin reaction, Category 1 H400 - Very toxic to aquatic life, Category 1 H410 - Very toxic to aquatic life with long lasting effects, Category 1
Precautionary statements (CLP)	:	P261 – Avoid breathing dust/fume/gas/mist/vapors/spray P272 - Contaminated work clothing should not be allowed out of the workplace P280 - Wear protective clothing, eye protection, face protection, protective gloves P302+P352 - IF ON SKIN: Wash with plenty of soap and water P321 – Specific treatment (see supplemental first aid instructions on this label) P333+ P313 - If skin irritation or rash occurs: Get medical advice/ attention P501 - Dispose of contents/ container to an approved waste disposal plant P363 - Wash contaminated clothing before reuse P273 - Avoid release to the environment P391 - Collect spillage. Hazardous to the aquatic environment
Other Hazard	:	This substance does not meet the criteria for PBT / vPvB of REACH regulation, annex XIII

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical Name	CAS No	EC No	Weight %	Classification
Zinc 2-mercaptobenzothiazole	155-04-4	205-840-3	≥ 85	H317 – May cause an allergic skin reaction, Category 1 H400 - Very toxic to aquatic life, Category 1 H410 - Very toxic to aquatic life with long lasting effects, Category 1
Benzothiazole-2-thiol	149-30-4	205-736-8	≤ 15	H317 – May cause an allergic skin reaction, Category 1 H400 - Very toxic to aquatic life, Category 1 H410 - Very toxic to aquatic life with long lasting effects, Category 1

4. FIRST AID MEASURES

Description of first aid measures

First-aid measures general: Instantly remove any clothing soiled by the product. In all cases of doubt, or when symptoms persist, seek medical attention.

First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.

First-aid measures after eye contact: 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/attention.

First-aid measures after ingestion: Rinse mouth. Get medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

General: May cause an allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

General:	Treat symptomatically. Persons with pre-existing skin, eye, or respiratory disease may be at increased risk from the irritant or allergic properties of this material. Attending physician should treat exposed patients symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing agents:	Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO_2).
Unsuitable extinguishing agents:	No information available.

Special hazards arising from the substance or mixture

General:	Thermal decomposition can lead to release of irritating and toxic gases and vapors, such as carbon oxides, sulfur oxides, nitrogen oxides, hydrogen cyanide, zinc oxides.

Advice for firefighters

General:	Fight fire from a safe distance and from a protected location. Flammable dust when in finely divided and highly suspended state. Use water spray to cool fire exposed surfaces. Do not allow runoff to enter waterways. Fire fighters should wear full protective clothing, including self-contained breathing equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

General measures:	Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Avoid generation of dust. Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protection recommended in Section 8.

Environmental precautions

General precautions:	Local authorities should be advised if significant spillages cannot be contained. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

General methods and materials:	Spill Procedures: Wear protective equipment specified. Avoid the generation of dust. Sweep, vacuum, or shovel and place it into closable container for disposal. Procedure for Cleaning/Absorption: Isolate area and remove sources of friction, impact, heat, low level electrical current, and RF energy. Isolate spill and stop leak where safe. Remove ignition sources and work with non-sparking tools. Scoop up and remove. Do NOT spread spilled product with water.

Reference to other sections

Sections:	See Section 7 for more information See section 8 for more information See section 13 for more information

7. HANDLING AND STORAGE

Precautions for safe handling

General:	Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Take precautionary measures against static discharges. Avoid generation of dust. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Use personal protection recommended in Section 8.

Conditions for safe storage, including any incompatibilities

General:	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Store away from strong oxidizing materials. Avoid exposure to direct sunlight. Keep locked up and out of reach of children. Keep away from food, drink and animal feeding stuffs. Store in accordance with local regulations.

Specific end use(s)

General:	No other information available.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

Control Parameters

Chemical Name	Netherlands-MAC	France	US-TLV	Germany	Italy

Zinc 2-mercaptobenzothiazole (CAS : 149-30-4)	4 mg/m^3	-	3 mg/m^3	TWA: 4 mg/m^3	-

The mixture: Nuisance Dust.
OSHA PEL/8Hr-TWA = 15 mg/m3 (Total Dust).
OSHA PEL/8-Hr TWA = 5 mg/m3 (Respirable Dust).
ACGIH TLV/8-Hr TWA = 10 mg/m3.

Derived no effect level (DNEL):

Zinc di(benzothiazol-2-yl) disulphide (CAS #: 155-04-4):

Workers	Inhalation, Systemic effects, Long term: 5.9 mg/m^3 Dermal, Systemic effects, Long term: 3.3 mg/kg bw/day
General Population	Inhalation, Systemic effects, Long term: 1 mg/m^3 Dermal, Systemic effects, Long term: 1.2 mg/kg bw/day Oral, Systemic effects, Long term: 0.6 mg/kg bw/day

Benzothiazole-2-thiol (CAS : 149-30-4):

Workers	Inhalation, Systemic effects, Long term: 8.8 mg/m^3 Inhalation, Systemic effects, Acute/short term: 70.4 mg/m^3 Dermal, Systemic effects, Long term: 5 mg/kg bw/day Dermal, Systemic effects, Acute/short term: 40 mg/kg bw/day
General Population	Inhalation, Systemic effects, Long term: 2.2 mg/m^3 Inhalation, Systemic effects, Acute/short term: 17.6 mg/m^3 Dermal, Systemic effects, Long term: 2.5 mg/kg bw/day Dermal, Systemic effects, Acute/short term: 20 mg/kg bw/day Oral, Systemic effects, Long term: 1.25 mg/kg bw/day Oral, Systemic effects, Acute/short term: 10 mg/kg bw/day

Predicted no effect concentration (PNEL):

Zinc di(benzothiazol-2-yl) disulphide (CAS #: 155-04-4):

General	PNEC aqua (freshwater): 0.004 mg/L PNEC aqua (marine water): 0.0004 mg/L PNEC aqua (intermittent, freshwater): 0.005 mg/l PNEC STP: 0.3 mg/L PNEC sediment (freshwater): 0.147 mg/kg sediment dw PNEC sediment (marine water): 0.0147 mg/kg sediment dw PNEC soil: 0.027 mg/kg soil dw

Benzothiazole-2-thiol (CAS : 149-30-4):

General:	PNEC aqua (freshwater): 0.0041 mg/L

PNEC aqua (marine water): 0.00041 mg/L
PNEC aqua (intermittent, freshwater): 0.005 mg/l
PNEC STP: 0.3 mg/L
PNEC sediment (freshwater): 0.147 mg/kg sediment dw
PNEC sediment (marine water): 0.0147 mg/kg sediment dw
PNEC soil: 0.027 mg/kg soil dw

Exposure controls

Engineering controls:	Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations. Remove all sources of ignition.
Personal protective equipment:	Suitable protective clothing.
Eye protection:	Wear safety glasses or goggles to protect against exposure. Eye protection is not required during typical product use conditions.
Hand protection:	Use protective gloves.
Respiratory protection:	Appropriate respiratory protection should be worn when applied engineering controls are not adequate to protect against inhalation exposure. Firefighting; use a Positive Pressure Demand Full Face Self Contained Breathing Apparatus.
Thermal hazard:	No information available.
Environmental exposure controls:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form: Solid powder or granule	Melting Point/Range: 300 °C
Color: Light yellow	Boiling Point/Range: Decomposes before boiling
Odor: Slight	Odor threshold: Not determined
pH: Not determined	Flash point: Not available

Vapor Pressure: Not determined	Flammability: Not flammable
Density at 20 °C: 1.63 g/cm³	Ignition temperature: 405°C at 1013 hPa
Relative density: Not available	Decomposition temperature: Not available
Solubility: Water: 20.6mg/L at 20°C	Partition coefficient (n-octanol/water): 155-04-4: 2.42 at 20°C
Oxidizing properties: Not determined	Explosion limits: Lower: Not applicable Upper: Not applicable

Other information: No further relevant information available.

10. STABILITY AND REACTIVITY

Reactivity: Stable under recommended storage and handling conditions.

Chemical Stability: Stable when stored at room temperature in closed, original container. Stable under normal conditions of handling, use and transportation.

Possibility of hazardous reactions: No hazardous reactions known. Hazardous polymerization will not occur.

Conditions to avoid: Dust formation. Heat, flames and sparks. Incompatible materials.

Incompatible materials: Strong oxidizing agents. Strong acids.

Hazardous decomposition products: Carbon oxides, sulfur oxides, nitrogen oxides, hydrogen cyanide, zinc oxides.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity: Not classified

Zinc 2-mercaptobenzothiazole (CAS : 155-04-4)	
LD50 oral rat	7500 mg/kg
LD50 dermal rabbit	> 7940 mg/kg
Benzothiazole-2-thiol (149-30-4)	
LD50 oral rat	3800 mg/kg

LD50 dermal rabbit	> 7940 mg/kg
LC50 Inhalation - Rat	> 1270 mg/l air

Skin corrosion/irritation: Skin, rabbit: not irritating.

Serious eye damage: Eyes, rabbit: not irritating.

Sensitization: May cause an allergic skin reaction, mouse, guinea pig.

Germ cell mutagenicity: Negative.

Carcinogenicity: This product or one of its ingredients present 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA. Negative in standard tests using bacteria and yeast cells.

Reproductive toxicity: For component MBT: A National Toxicology Program (NTP) 2-year study on rats and mice concluded that there was "some evidence of carcinogenic activity" in treated rats.

STOT single exposure: Not classified.

STOT multiple exposure: Via oral route - systemic effects (NOAEL): (50mg/kg bw/day)

Aspiration hazard: Not classified

Endocrine disrupting properties: The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

Other information: No information available

12. ECOLOGICAL INFORMATION

Toxicity

Very toxic to aquatic life with long lasting effects.

Zinc diethyl dithiocarbamate (CAS : 14324-55-1)	
LC50 96h – Fish	0.73 mg/l Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 48h - Crustacea	0.71 mg/l Daphnia magna
EC50 72h - Algae	0.5 mg/l Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC chronic Crustacea	0.08 mg/l Daphnia magna

NOEC chronic fish	0.041 mg/l Oncorhynchus mykiss (previous name: Salmo gairdneri)
NOEC chronic algae	0.066 mg/l Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
Benzothiazole-2-thiol (149-30-4)	
LC50 96h - Fish	0.73 mg/l Oncorhynchus mykiss (previous name: Salmo gairdneri)
LC50 96h - Fish	0.42 mg/l Oncorhynchus mykiss [static]
EC50 48h - Crustacea	8.5 mg/l Daphnia magna
EC50 48h- Crustacea	16.1 mg/l Daphnia magna
EC50 48h - Crustacea	0.71 mg/l Daphnia magna
EC50 72h - Algae	0.5 mg/l Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum
EC50 96h - Algae	0.25 mg/l Pseudokirchneriella subcapitata
NOEC chronic Crustacea	0.08 mg/l Daphnia magna.
NOEC chronic fish	0.041 mg/l Oncorhynchus mykiss (previous name: Salmo gairdneri)
NOEC chronic algae	0.066 mg/l Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Persistence and degradability
Not readily biodegradable.

Bioaccumulative potential
Benzothiazole-2-thiol (CAS : 149-30-4) - <0.8 BCF
Zinc 2-mercaptobenzothiazole (CAS #: 155-04-4) – 0.8 BCF

Mobility in soil
Zinc 2-mercaptobenzothiazole (CAS : 155-04-4) - Log Koc: 4.17

Results of PBT and vPvB assessment
This substance is not considered to be persistent, bioaccumulating or toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Endocrine disrupting properties
The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

Other adverse effects
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products:	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging:	Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORTATION INFORMATION

UN-Number	
DOT	Not regulated
ADR, ADN, IMDG, IATA, RID	UN3077
UN proper shipping name	
DOT	N/A
ADR, ADN, IMDG, IATA, RID	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S (Zinc 2-mercaptobenzothiazole)
Transport hazard class(es)	
DOT	N/A
ADR, ADN, IMDG, IATA, RID	9
Packing group	
DOT	N/A
ADR, ADN, IMDG, IATA, RID	III
Environmental hazards	Marine Pollutant
Marine pollutant	Yes (fish and tree symbol)
Special Marking (ADR)	Fish and tree symbol
Special Marking (IATA)	Fish and tree symbol
Special precautions for user	Not data available
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable
UN "Model Regulation"	

15. REGULATORY INFORMATION

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

SARA Section 355 (extremely hazardous substances)	Not listed
SARA Section 313 (Specific toxic chemical listings)	CAS: 149-30-4 listed
TSCA (Toxic Substances Control Act)	Listed
Proposition 65 (California)	
Chemicals known to cause cancer	CAS: 149-30-4 listed
Chemicals known to cause reproductive toxicity for females	Not listed
Chemicals known to cause reproductive toxicity for males	Not listed
Chemicals known to cause developmental toxicity	Not listed
Carcinogenic Categories	
IARC (International Agency for Research on Cancer)	CAS: 149-30-4 listed

TLV (Threshold Limit Value established by ACGIH)	Not listed
NIOSH-Ca (National Institute for Occupational Safety and Health)	Not listed
OSHA (Occupational Safety & Health Administration)	Not listed
Canada	
Canadian Domestic Substances List (DSL)	Listed
Canadian Ingredient Disclosure list (limit 0.1%)	Not listed
Canadian Ingredient Disclosure list (limit 1%)	Not listed
REACH	
REACH Candidate List	Not listed
REACH XIV List	Not listed

Chemical safety assessment: A chemical safety assessment has 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