

SAFETY DATA SHEET

Section 1. Identification

| | |
|--------------------------------------|--|
| Product identifier | ZETAX® (ZMBT) |
| Product code | 74431 |
| Chemical identity | 2(3H)-Benzothiazolethione, zinc salt |
| Other means of identification | Zinc 2-mercaptobenzothiazole |
| Product type | Powder. |
| Material uses | Accelerator. |
| Supplier/Manufacturer | Vanderbilt Chemicals, LLC 30 Winfield Street Norwalk, CT 06855 1-203-853-1400 |
| Emergency telephone number | Chemtrec: 1-800-424-9300 Outside US: +1-703-527-3887 |

Section 2. Hazard(s) identification

| | |
|---|---|
| OSHA/HCS status | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |
| Classification of the substance or mixture | COMBUSTIBLE DUSTS SKIN SENSITIZATION - Category 1 |

GHS label elements

Hazard pictograms



| | |
|--------------------------|--|
| Signal word | Warning |
| Hazard statements | May cause an allergic skin reaction. May form combustible dust concentrations in air. |

Precautionary statements

| | |
|------------------------------------|---|
| Prevention | Wear protective gloves. Avoid breathing dust or mist. Contaminated work clothing must not be allowed out of the workplace. |
| Response | IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. |
| Storage | Not applicable. |
| Disposal | Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Supplemental label elements | Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation. |

Section 2. Hazard(s) identification

Hazards not otherwise classified None known.

Section 3. Composition and ingredient information

Substance/mixture Mixture
Chemical identity 2(3H)-Benzothiazolethione, zinc salt
Other means of identification Zinc 2-mercaptobenzothiazole

| Ingredient name | CAS number | % by weight |
|------------------------------|------------|-------------|
| zinc 2-mercaptobenzothiazole | 155-04-4 | 80 - 90 |
| 2-mercaptobenzothiazole | 149-30-4 | 10 - 20 |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

The total concentration of ingredients in this product, reported or not in this section, is 100%.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First aid measures

| | |
|---------------------|--|
| Eye contact | Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes. |
| Inhalation | Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. |
| Skin contact | May cause an allergic skin reaction. |
| Ingestion | No known significant effects or critical hazards. |

Over-exposure signs/symptoms

| | |
|---------------------|---|
| Eye contact | Adverse symptoms may include the following: irritation redness |
| Inhalation | Adverse symptoms may include the following: respiratory tract irritation coughing |
| Skin contact | Adverse symptoms may include the following: irritation redness |
| Ingestion | No specific data. |

Indication of immediate medical attention and special treatment needed, if necessary

| | |
|-----------------------------------|---|
| Notes to physician | In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Specific treatments | No specific treatment. |
| Protection of first-aiders | No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

| | |
|---------------------------------------|---|
| Suitable extinguishing media | In case of fire, use water spray (fog), foam, dry chemical or CO ₂ . |
| Unsuitable extinguishing media | Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture. |

Specific hazards arising from the chemical

| | |
|---|--|
| Hazardous thermal decomposition products | May form explosible dust-air mixture if dispersed. Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides |
|---|--|

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 5. Fire-fighting measures

| | |
|------------------|---|
| Remark | Acrid fumes may develop under fire conditions. |
| Remark(s) | As with any dry material, pouring or allowing to free-fall or to be conveyed through chutes or pipes can accumulate and generate electrostatic sparks, potentially causing ignition of the material itself, or of any flammable materials which may come in contact with the material or its container. |

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

| | |
|------------------------------------|---|
| For non-emergency personnel | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| For emergency responders | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |

| | |
|----------------------------------|---|
| Environmental precautions | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
|----------------------------------|---|

Methods and materials for containment and cleaning up

| | |
|--------------------|---|
| Small spill | Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. |
| Large spill | Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. |

Section 7. Handling and storage

Precautions for safe handling

| | |
|----------------------------|--|
| Protective measures | Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. |
|----------------------------|--|

Section 7. Handling and storage

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| zinc 2-mercaptobenzothiazole 2-mercaptobenzothiazole | None. OARS WEEL (United States, 9/2024) Absorbed through skin , Skin sensitizer. TWA 8 hours: 5 mg/m ³ . |

Appropriate engineering controls

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles. Recommended: splash goggles

Skin protection

Section 8. Exposure controls and personal protection

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat

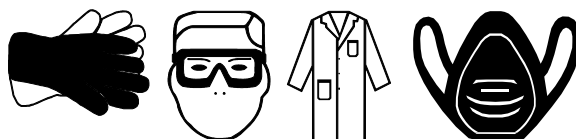
Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Dust respirator.

Personal protective equipment (Pictograms)



Section 9. Physical and chemical properties

Appearance

| | |
|--|--|
| Physical state | Solid. [Powder.] |
| Color | Cream to light yellow. |
| Odor | Not available. |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point | >200°C (>392°F) |
| Boiling point | Not available. |
| Flash point | Closed cup: 170°C (338°F) [Tagliabue.] |
| Burning time | Not available. |
| Burning rate | Not available. |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Acrid fumes may develop under fire conditions. |
| Lower and upper explosive (flammable) limits | Not applicable. |
| Vapor pressure | Not available. |
| Vapor density | Not applicable. |
| Density | 1.7 g/cm ³ [20°C (68°F)] |
| Relative density | 1.7 |
| Solubility(ies) | |

| Media | Result |
|------------|-------------|
| cold water | Not soluble |

Solubility in water Not available.

Section 9. Physical and chemical properties

| | |
|---|--|
| Partition coefficient: n-octanol/water | Not applicable. |
| Auto-ignition temperature | Not applicable. |
| Decomposition temperature | Not available. |
| SADT | Not available. |
| Viscosity | Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available. |

Section 10. Stability and reactivity

| | |
|---|---|
| Reactivity | No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | The product is stable. |
| Possibility of hazardous reactions | Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation. |
| Incompatible materials | Reactive or incompatible with the following materials: oxidizing materials |
| Hazardous decomposition products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---------------------------------|---------------------------------|---------|-------------|----------|
| zinc 2-mercaptobenzothiazole | LD50 Dermal | Rabbit | >7940 mg/kg | - |
| | LD50 Oral | Rat | 540 mg/kg | - |
| 2-mercaptobenzothiazole | LD50 Oral | Rat | 7500 mg/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | >1270 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >7940 mg/kg | - |
| | LD50 Oral | Rat | 3800 mg/kg | - |

Section 11. Toxicological information

Conclusion/Summary

In NTP studies, MBT in corn oil was force fed through a stomach tube to rats and mice for two years. An increased incidence of tumors in a number of tissues was seen in rats. No increase in the incidence of tumors was observed in mice. The strength of the data was evaluated "some", "equivocal", "no" or "inadequate" evidence of carcinogenicity. Because only a limited response occurred, NTP interpreted these studies as tumor response (e.g.: no effect in mice; some effect in rats) and other concerns about the conduct of these studies makes it difficult to clearly assess the significance of the results to those who work with MBT. We recommend that worker exposure to MBT should be minimized.

Irritation/Corrosion

Not available.

Conclusion/Summary

Skin

zinc 2-mercaptobenzothiazole and 2-mercaptobenzothiazole: Non-irritating to the skin. (Rabbit)

Eyes

zinc 2-mercaptobenzothiazole and 2-mercaptobenzothiazole: Non-irritating to the eyes. (Rabbit)

Sensitization

| Product/ingredient name | Route of exposure | Species | Result |
|---------------------------------|-------------------|------------|-------------|
| zinc 2-mercaptobenzothiazole | skin | Mouse | Sensitizing |
| 2-mercaptobenzothiazole | skin | Guinea pig | Sensitizing |

Mutagenicity

| Product/ingredient name | Test | Experiment | Result |
|---------------------------------|----------|--|----------|
| zinc 2-mercaptobenzothiazole | OECD 471 | Experiment: In vitro Subject: Bacteria | Negative |
| | - | Experiment: In vivo Subject: Mammalian-Animal | Negative |
| 2-mercaptobenzothiazole | - | Experiment: In vitro Subject: Bacteria | Negative |
| | - | Experiment: In vivo Subject: Mammalian-Animal | Negative |

Carcinogenicity

Not available.

| Product/ingredient name | OSHA | IARC | NTP |
|-------------------------|------|------|-----|
| 2-mercaptobenzothiazole | - | 2A | - |

Reproductive toxicity

Section 11. Toxicological information

| Product/ingredient name | Maternal toxicity | Fertility | Development toxin | Species | Dose | Exposure |
|---------------------------------|-------------------|-----------|-------------------|---------|--|----------|
| zinc 2-mercaptobenzothiazole | - | - | - | Rabbit | Oral: 300 mg/kg (Based on tests of similar materials) | 12 days |
| | - | - | - | Rat | Oral: >15000 ppm (Based on tests of similar materials) | - |

Teratogenicity

Not available.

Conclusion/Summary

A teratology study in rats with MBT showed negative results. An increase in birth defects was observed in groups of rats and mice given mercaptobenzothiazole disulfide by stomach tube, but only at doses that produced adverse effects on mothers. No effects were observed in the other dose groups. However, an increase in embryo death and post implantation losses was reported in another study using rats. Similar results were reported in a fertility study also using rats.

Mice were given MBT at a dosage of 464 mg/kg by subcutaneous injection on days 6 through 15 of gestation. In two strains, increased incidences of fetal malformations were noted, but only at maternally toxic doses.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact

May cause an allergic skin reaction.

Ingestion

No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

| | |
|---------------------|---|
| Eye contact | Adverse symptoms may include the following: irritation redness |
| Inhalation | Adverse symptoms may include the following: respiratory tract irritation coughing |
| Skin contact | Adverse symptoms may include the following: irritation redness |
| Ingestion | No specific data. |

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |

Long term exposure

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |

Potential chronic health effects

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|--------------------|---------|------------|----------|
| 2-mercaptobenzothiazole | Chronic LOAEL Oral | Rat | 2500 mg/kg | - |

| | |
|------------------------------|--|
| General | Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. |
| Carcinogenicity | No known significant effects or critical hazards. |
| Mutagenicity | No known significant effects or critical hazards. |
| Teratogenicity | No known significant effects or critical hazards. |
| Developmental effects | No known significant effects or critical hazards. |
| Fertility effects | No known significant effects or critical hazards. |

Numerical measures of toxicity

Acute toxicity estimates

| Route | ATE value |
|--------|-----------------|
| Dermal | 128762.63 mg/kg |

Other information Not available.

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---------------------------------|---|----------------|----------|
| zinc 2-mercaptobenzothiazole | Acute EC50 0.5 mg/l (Based on tests of similar materials) | Algae | 72 hours |
| | Acute EC50 0.71 mg/l (Based on tests of similar materials) | Daphnia | 48 hours |
| | Acute EC50 1220 mg/l | Micro-organism | 3 hours |
| | Acute LC50 0.73 mg/l (Based on tests of similar materials) | Fish | 96 hours |
| | Acute NOEC 0.066 mg/l (Based on tests of similar materials) | Algae | 72 hours |
| | Chronic NOEC 0.08 mg/l (Based on tests of similar materials) | Daphnia | 21 days |
| | Chronic NOEC 0.041 mg/l (Based on tests of similar materials) | Fish | 89 days |
| 2-mercaptobenzothiazole | Acute EC50 0.5 mg/l | Algae | 72 hours |
| | Acute EC50 3301 mg/l | Micro-organism | 3 hours |
| | Acute LC50 0.71 mg/l | Daphnia | 48 hours |
| | Acute LC50 0.73 mg/l | Fish | 96 hours |
| | Acute NOEC 0.066 mg/l | Algae | 72 hours |
| | Acute NOEC 0.08 mg/l | Daphnia | 21 days |
| | Acute NOEC 0.041 mg/l | Fish | 96 hours |

Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---------------------------------|-----------|-------------------------------|------|----------|
| zinc 2-mercaptobenzothiazole | OECD 301C | 2.5 % - Not readily - 14 days | - | - |
| 2-mercaptobenzothiazole | OECD 301C | 2.5 % - Not readily - 14 days | - | - |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---------------------------------|-------------------|------------|------------------|
| zinc 2-mercaptobenzothiazole | - | - | Not readily |
| 2-mercaptobenzothiazole | - | - | Not readily |

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---------------------------------|--------------------|---|-----------|
| zinc 2-mercaptobenzothiazole | 5.02 | <8 [Bioaccumulation test of chemical substance in fish and shellfish] | Low |
| 2-mercaptobenzothiazole | 2.42 | 18.35 | Low |

Mobility in soil

Soil/Water partition coefficient Not available.

Other adverse effects No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| Regulatory information | UN number | Proper shipping name | Classes | PG* | Label | Additional information |
|---------------------------|-----------|---|---------|-----|--|------------------------------------|
| DOT Classification | UN3077 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-mercaptobenzothiazole) | 9 | III | The image shows two diamond-shaped hazard labels. The top one is for Class 9 (Environmentally Hazardous Substance) with a black and white striped pattern. The bottom one is for Class 9 (Environmentally Hazardous Substance) with a tree and water symbol. | Remarks Marine pollutant |
| TDG Classification | UN3077 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-mercaptobenzothiazole) | 9 | III | The image shows two diamond-shaped hazard labels. The top one is for Class 9 (Environmentally Hazardous Substance) with a black and white striped pattern. The bottom one is for Class 9 (Environmentally Hazardous Substance) with a tree and water symbol. | Remarks Marine pollutant |
| ADR/RID Class | UN3077 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-mercaptobenzothiazole) | 9 | III | The image shows two diamond-shaped hazard labels. The top one is for Class 9 (Environmentally Hazardous Substance) with a black and white striped pattern. The bottom one is for Class 9 (Environmentally Hazardous Substance) with a tree and water symbol. | Remarks Marine pollutant |
| IMDG Class | UN3077 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-mercaptobenzothiazole) | 9 | III | The image shows two diamond-shaped hazard labels. The top one is for Class 9 (Environmentally Hazardous Substance) with a black and white striped pattern. The bottom one is for Class 9 (Environmentally Hazardous Substance) with a tree and water symbol. | Remarks Marine pollutant |
| IATA-DGR Class | UN3077 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-mercaptobenzothiazole) | 9 | III | The image shows two diamond-shaped hazard labels. The top one is for Class 9 (Environmentally Hazardous Substance) with a black and white striped pattern. The bottom one is for Class 9 (Environmentally Hazardous Substance) with a tree and water symbol. | - |

Section 14. Transport information

PG* : Packing group

Section 15. Regulatory information

U.S. Federal regulations

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 307: zinc 2-mercaptobenzothiazole

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) Not listed

Clean Air Act Section 602 Class I Substances Not listed

Clean Air Act Section 602 Class II Substances Not listed

DEA List I Chemicals (Precursor Chemicals) Not listed

DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ Not applicable.

SARA 311/312

Classification COMBUSTIBLE DUSTS
SKIN SENSITIZATION - Category 1

Composition/information on ingredients

| Name | % | Classification |
|------------------------------|---------|---|
| zinc 2-mercaptobenzothiazole | 80 - 90 | ACUTE TOXICITY (oral) - Category 4 SKIN SENSITIZATION - Category 1 |
| 2-mercaptobenzothiazole | 10 - 20 | ACUTE TOXICITY (oral) - Category 3 SKIN SENSITIZATION - Category 1 |

SARA 313

| | Product name | CAS number | % |
|--|------------------------------|------------|---------|
| Form R - Reporting requirements | zinc 2-mercaptobenzothiazole | 155-04-4 | 80 - 90 |
| | 2-mercaptobenzothiazole | 149-30-4 | 10 - 20 |
| Supplier notification | zinc 2-mercaptobenzothiazole | 155-04-4 | 80 - 90 |
| | 2-mercaptobenzothiazole | 149-30-4 | 10 - 20 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts The following components are listed: other ingredients

New York None of the components are listed.


New Jersey The following components are listed: ZINC compounds;
2-MERCAPTOBENZOTHIAZOLE

Section 15. Regulatory information

Pennsylvania

The following components are listed: ZINC COMPOUNDS

California Prop. 65

 **WARNING:** This product can expose you to 2-Mercaptobenzothiazole, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name

No significant risk level

Maximum acceptable dosage level

| Ingredient name | No significant risk level | Maximum acceptable dosage level |
|-------------------------|---------------------------|---------------------------------|
| 2-Mercaptobenzothiazole | - | - |

Inventory list

Australia

All components are listed or exempted.

Canada

All components are listed or exempted.

China

All components are listed or exempted.

Japan

All components are listed or exempted.

New Zealand

All components are listed or exempted.

Philippines

All components are listed or exempted.

Republic of Korea

All components are listed or exempted.

Taiwan

All components are listed or exempted.

United States

All components are active or exempted.

Section 16. Any other relevant information

Hazardous Material Information System (U.S.A.)

| | | |
|------------------|---|---|
| Health | / | 2 |
| Flammability | | 1 |
| Physical hazards | | 0 |
| | | |

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



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Key to abbreviations

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

References

Not available.

Information contact

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