

SAFETY DATA SHEET

GHS

United States

Section 1. Product and company identification

Product name VANOX® ZMTI In case of emergency

1-203-853-1400

Supplier/Manufacturer Vanderbilt Chemicals, LLC Chemtrec: 1-800-424-9300

Outside US: +1-703-527-3887

30 Winfield Street Norwalk, CT 06855

53499

Chemical name 2H-Benzimidazole-2-thione,1,3-dihydro-4(or 5)-methyl-

Synonym Zinc 2-mercaptotoluimidazole and petroleum process oil

Material uses Antioxidant.

Product type Powder.

Code

Section 2. Hazards identification

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Classification of the COMBUSTIBLE DUSTS

substance or mixture ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 4

SKIN SENSITIZATION - Category 1

TOXIC TO REPRODUCTION (Fertility) - Category 1B TOXIC TO REPRODUCTION (Unborn child) - Category 1B

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (bone marrow, liver,

pituitary gland, spleen, thyroid) - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation

toxicity: 4%

GHS label elements

Hazard pictograms





Signal word Danger

Hazard statements May form combustible dust concentrations in air.

Harmful if swallowed or if inhaled. May cause an allergic skin reaction. May damage fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure. (bone marrow,

liver, pituitary gland, spleen, thyroid)

Precautionary statements

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Section 2. Hazards identification

Prevention Obtain special instructions before use. Do not handle until all safety precautions have

> been read and understood. Wear protective gloves. Wear eye or face protection: Recommended: splash goggles. Wear protective clothing: Recommended: lab coat. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Response Get medical attention if you feel unwell. IF exposed or concerned: Get medical

> attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin

irritation or rash occurs: Get medical attention.

Storage Store locked up.

Dispose of contents and container in accordance with all local, regional, national and **Disposal**

international regulations.

Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames

and other ignition sources. No smoking. Prevent dust accumulation.

None known.

Supplemental label

elements

Hazards not otherwise

classified

Section 3. Composition/information on ingredients

Substance/mixture

Eye contact

Skin contact

Mixture

| Ingredient name | CAS number | % by weight |
|---|--------------------------|-------------|
| zinc 2-mercaptotoluimidazole petroleum process oil, <3.0% DMSO extractable material | 61617-00-3 64742-52-5 | 96 4 |

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

Section 4. First aid measures

Description of necessary first aid measures

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower evelids. Check for and remove any contact lenses. Continue to rinse for at least 10

minutes. Get medical attention following exposure or if feeling unwell.

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it

is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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.

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.

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Section 4. First aid measures

Ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 necessary, call a poison center or physician. 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

Eye contact Exposure to airborne concentrations above statutory or recommended exposure limits

may cause irritation of the eyes.

Inhalation Harmful if inhaled. 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 Harmful if swallowed.

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

reduced fetal weight increase in fetal deaths skeletal malformations

Skin contact Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

Ingestion Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

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-aidersNo action shall be taken involving any personal risk or without suitable training. If it is

suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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)

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Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use water spray (fog), foam, dry chemical or CO2.

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

May form explosible dust-air mixture if dispersed.

Hazardous thermal decomposition products

Decomposition products may include the following materials: carbon dioxide

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 Remark(s)

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

Dust suspended in air in critical proportions and in the presence of an ignition source presents an explosion hazard. 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.

Dust Explosion Data

- Dust explosion category: Classified as St1 class dust (Weak explosion characteristic).
- Maximum pressure of explosion (Pmax)(bar): 7.9 ± 10%
- Minimum ignition energy (dust cloud)(E min)(mJ): 30<MIE<100, Est. = 37
- Dust-specific constant (Kst) (bar. m/s): 190 ± 12%

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

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Section 6. Accidental release measures

Small spill

Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. 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. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not ingest. 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.

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. Store locked up. 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/personal protection

Control parameters

Occupational exposure limits

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Section 8. Exposure controls/personal protection

| Ingredient name | Exposure limits |
|--|--|
| petroleum process oil, <3.0% DMSO extractable material | ACGIH TLV (United States, 3/2012). TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction NIOSH REL (United States, 1/2013). TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist ACGIH TLV (United States). STEL: 10 mg/m³ OSHA PEL (United States, 6/2010). TWA: 5 mg/m³ 8 hours. |

Appropriate engineering controls

Use only with adequate ventilation. 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.

Eve/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 sideshields. If operating conditions cause high dust concentrations to be produced, use dust goggles. Recommended: splash goggles

Skin 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.

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Section 8. Exposure controls/personal protection

Personal protective equipment (Pictograms)



Section 9. Physical and chemical properties

Appearance

Physical state Solid. [Powder.]

Color Cream to light yellow.

Odor None.

Odor threshold Not available. Hq Not available. **Melting point** Not available. **Boiling point** Not available. Flash point Not available. **Burning time** Not available. **Burning rate** Not available. **Evaporation rate** Not available. Flammability (solid, gas) Not available. Lower and upper explosive Not available.

(flammable) limits

Vapor pressureNot available.Vapor densityNot available.Density1.54 g/cm³Relative density1.54

Solubility Insoluble in the following materials: cold water.

Solubility in water 0.032 g/l
Partition coefficient: n- Not available.

octanol/water

Auto-ignition temperature

Decomposition temperature

SADT

Not available.

Not available.

Not available.

Not available.

Section 10. Stability and reactivity

ReactivityNo 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.

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Section 10. Stability and reactivity

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 |
|--|---------------------------------|---------|-------------|----------|
| petroleum process oil, <3.0% DMSO extractable material | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| zinc 2-mercaptotoluimidazole | LC50 Inhalation Dusts and mists | Rat | >2.12 mg/l | 4 hours |
| · | LD50 Dermal | Rat | >2000 mg/kg | - |
| | LD50 Oral | Rat | 3.2 mL/kg | - |

Irritation/Corrosion

Not available.

Conclusion/Summary

Skinzinc 2-mercaptotoluimidazole: Non-irritating to the skin. (Rabbit)Eyeszinc 2-mercaptotoluimidazole: Non-irritating to the eyes. (Rabbit)

Sensitization

| • | Route of exposure | Species | Result |
|---------------------------------|-------------------|------------|-------------|
| zinc 2-mercaptotoluimidazole | skin | Guinea pig | Sensitizing |

Mutagenicity

| Product/ingredient name | Test | Experiment | Result |
|---------------------------------|----------|--|----------|
| zinc 2-mercaptotoluimidazole | OECD 471 | Experiment: In vitro Subject: Bacteria | Negative |
| · | OECD 476 | Experiment: In vitro Subject: Mammalian-Animal | Negative |
| | OECD 473 | Experiment: In vitro Subject: Mammalian-Human | Negative |

Carcinogenicity

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Section 11. Toxicological information

Not available.

Reproductive toxicity

Not available.

Conclusion/Summary

The administration of VANOX® ZMTI to male and female rats at dose levels of up to 7500 ppm for a period of up to 47 days (which included mating period, gestation and early lactation phase) resulted in treatment-related toxic effects upon adults. This included effects upon mating performance, fertility and the parturition process. The "No Observed Adverse Effect Level" (NOAEL) for effects upon adults either general systemic effects or reproduction, could not be established, however, the "Lowest Observed Adverse Effect Level" LOAEL (F1, Oral, Rat) came out to be 150 mg/kg/bw/day under OECD 422.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

| Name | Category | Route of exposure | Target organs |
|------------------------------|------------|-------------------|---|
| zinc 2-mercaptotoluimidazole | Category 2 | Oral | bone marrow, liver, pituitary gland, spleen and thyroid |

Aspiration hazard

Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Inhalation.

Potential acute health effects

Exposure to airborne concentrations above statutory or recommended exposure

limits may cause irritation of the eyes.

Inhalation Harmful if inhaled. Exposure to airborne concentrations above statutory or

recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact May be harmful in contact with skin. May cause an allergic skin reaction.

Ingestion Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact Adverse symptoms may include the following:

irritation redness

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Section 11. Toxicological information

Inhalation Adverse symptoms may include the following:

respiratory tract irritation

coughing

reduced fetal weight increase in fetal deaths skeletal malformations

Skin contact Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

Ingestion Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

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

Short term exposure

Potential immediate

Not available.

effects

Potential delayed effects Not available.

Long term exposure

Potential immediate

effects

Not available.

Potential delayed effects Not available.

Potential chronic health effects

Not available.

General May cause damage to organs through prolonged or repeated exposure. 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 May damage the unborn child.

Developmental effects No known significant effects or critical hazards.

Fertility effects May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

| Route | ATE value |
|------------------------------|---------------|
| Oral | 520.83 mg/kg |
| Dermal | 2604.17 mg/kg |
| Inhalation (dusts and mists) | 1.56 mg/l |

Other information Not available.

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Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|------------------------------|----------------------|----------------|----------|
| zinc 2-mercaptotoluimidazole | NOEC 0.69 mg/l | Algae | 72 hours |
| | NOEC 2.1 mg/l | Fish | 96 hours |
| | Acute EC50 6.6 mg/l | Algae | 72 hours |
| | Acute EC50 1.4 mg/l | Daphnia | 48 hours |
| | Acute EC50 6620 mg/l | Micro-organism | 3 hours |
| | Acute LC50 5.6 mg/l | Fish | 96 hours |

Persistence and degradability

| Product/ingredient name | Test | Result | | Dose | | Inoculum |
|------------------------------|-------------------|------------|-------------------|------|---------|------------|
| zinc 2-mercaptotoluimidazole | OECD 301B | 27 % - Not | readily - 28 days | - | | - |
| Product/ingredient name | Aquatic half-life | | Photolysis | | Biodeg | radability |
| zinc 2-mercaptotoluimidazole | - | | - | | Not rea | idily |

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|------------------------------|--------|-------|-----------|
| zinc 2-mercaptotoluimidazole | - | 1.017 | low |

Mobility in soil

Soil/water partition coefficient (K_{oc})

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.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

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Section 14. Transport information

| Regulatory information | UN number | Proper shipping name | Classes | PG* | Label | Additional information |
|------------------------|----------------|---|---------|-----|--|-----------------------------|
| DOT Classification | Not regulated. | - | - | - | | - |
| TDG Classification | Not regulated. | - | - | - | | - |
| ADR/RID Class | UN3077 | Environmentally hazardous substance, solid, n.o.s. (zinc 2-mercaptotoluimidazole) | 9 | III | | Remarks Marine pollutant |
| IMDG Class | UN3077 | Environmentally hazardous substance, solid, n.o.s (zinc 2-mercaptotoluimidazole) | 9 | III | ************************************** | Remarks Marine pollutant |
| IATA-DGR Class | UN3077 | Environmentally hazardous substance, solid, n.o.s. (zinc 2-mercaptotoluimidazole) | 9 | III | 1 1 1 1 1 1 1 1 1 1 | Remarks Marine pollutant |

PG*: Packing group

Section 15. Regulatory information

<u>United States inventory (TSCA 8b)</u> All components are listed or exempted.

U.S. Federal regulations

TSCA 8(a) CDR Exempt/Partial exemption: Not determined Clean Water Act (CWA) 307: zinc 2-mercaptotoluimidazole

Clean Air Act Section 112 Not listed

(b) Hazardous Air Pollutants (HAPs)

Not listed

Class I Substances

ction 602 Not listed

Clean Air Act Section 602

Clean Air Act Section 602

Class II Substances

NOT HISTOC

DEA List I Chemicals

Not listed

(Precursor Chemicals)

Not listed

DEA List II Chemicals (Essential Chemicals)

SARA 302/304

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Section 15. Regulatory information

Composition/information on ingredients

No products were found.

SARA 304 RQ Not applicable.

SARA 311/312

Classification COMBUSTIBLE DUSTS

ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 4

SKIN SENSITIZATION - Category 1

TOXIC TO REPRODUCTION (Fertility) - Category 1B TOXIC TO REPRODUCTION (Unborn child) - Category 1B

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (bone marrow, liver,

pituitary gland, spleen, thyroid) - Category 2

Composition/information on ingredients

| Name | % | Classification |
|------------------------------|---|---|
| zinc 2-mercaptotoluimidazole | | ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN SENSITIZATION - Category 1B TOXIC TO REPRODUCTION (Fertility) - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (bone marrow, liver, pituitary gland, spleen, thyroid) (oral) - Category 2 |

SARA 313

| | Product name | CAS number | % |
|---------------------------------|------------------------------|------------|----|
| Form R - Reporting requirements | zinc 2-mercaptotoluimidazole | 61617-00-3 | 96 |
| Supplier notification | zinc 2-mercaptotoluimidazole | 61617-00-3 | 96 |

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: OIL MIST, MINERAL

New York None of the components are listed.

New Jersey The following components are listed: ZINC compounds

Pennsylvania The following components are listed: ZINC COMPOUNDS

California Prop. 65 None of the components are listed.

International regulations

Australia inventory (AICS)

Canada inventory

China inventory (IECSC)

Europe inventory

Japan inventory (ENCS)

Korea inventory (KECI)

New Zealand Inventory of Chemicals (NZIoC)

All components are listed or exempted.

Philippines inventory (PICCS) All components are listed or exempted.

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Section 15. Regulatory information

Taiwan Chemical Substances Inventory (TCSI)

All components are listed or exempted.

Section 16. Other information

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



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. 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.)



Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

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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 Vanderbilt Global Services, LLC

Corporate Risk Management

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Section 16. Other information

1-203-295-2143

Visit www.vanderbiltchemicals.com for more information.

Notice to reader

Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patent or in violation of any law or regulation. It is the user's responsibility to determine for himself the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.

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