

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : WESTCO ZMTI
Synonyms : 13-dihydro-4(or 5)-methyl-2H-benzimidazole-2-thione, zinc salt / Zinc 2-mercaptotoluimidazole and petroleum process oil

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Antioxidant
Rubbers
Restrictions on use : Any use not specified

1.3. Supplier

Western Reserve Chemical Corporation
4837 Darrow Road
Stow, OH 44224 - USA
T 330 650 2244 - F 330 650 2255
www.wrchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC 1 800 424 9300 USA

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification

Acute toxicity (oral), Category 4 H302 Harmful if swallowed.
Acute toxicity (inhalation:dust,mist) Category 4 H332 Harmful if inhaled.
Skin sensitisation, Category 1 H317 May cause an allergic skin reaction.
Reproductive toxicity, Category 2 H361 Suspected of damaging fertility or the unborn child.
Specific target organ toxicity — Repeated exposure, Category 2 H373 May cause damage to organs through prolonged or repeated exposure.
Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

Hazard pictograms (GHS) :



Signal word (GHS) : Warning
Hazard statements (GHS_US) : H302+H332 - Harmful if swallowed or if inhaled
H317 - May cause an allergic skin reaction.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statements (GHS) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
P302+P352 - If on skin: Wash with plenty of water.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P312 - Call a poison center/doctor if you feel unwell
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

WESTCO ZMTI

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS_US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS classification
Zinc 2-mercapto-4(5)-methylbenzimidazole	(CAS-No.) 61617-00-3	≥ 98	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Sens. 1, H317 Repr. 2, H361 STOT RE 2, H373 Aquatic Chronic 2, H411
White mineral oil	(CAS-No.) 8042-47-5	< 2	Asp. Tox. 1, H304

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Allow the victim to rest. Call a POISON CENTER/doctor if you feel unwell.
- First-aid measures after skin contact : Wash skin thoroughly with mild soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects : Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
- Symptoms/effects after inhalation : Harmful if inhaled. Sneezing. May cause irritation of the mucous membranes. Cough. Shortness of breath.
- Symptoms/effects after skin contact : May cause an allergic skin reaction. Redness. Skin rash/inflammation. Itching.
- Symptoms/effects after eye contact : Tears. Redness. stinging.
- Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Dry chemical.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Fire hazard : Burning produces irritating, toxic and noxious fumes. Carbon oxides (CO, CO₂). metallic oxides. Nitrogen oxides. Sulphur oxides.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

WESTCO ZMTI

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid all unnecessary exposure. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment.

6.1.1. For non-emergency personnel

Protective equipment : Refer to section 8.2.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Refer to section 8.2.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so. Move containers from spill area.

Methods for cleaning up : Minimise generation of dust. Dust deposited may be vacuum cleaned. Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place.

Incompatible products : Strong acids. Strong oxidizers. Nitrates.

Incompatible materials : Sources of ignition.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

WESTCO ZMTI
No additional information available
White mineral oil (8042-47-5)
No additional information available
Zinc 2-mercapto-4(5)-methylbenzimidazole (61617-00-3)
No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid creating or spreading dust. Avoid dispersal of dust in the air (i.e. clearing dust surfaces with compressed air). Ensure that there is a suitable ventilation system. Either local exhaust or general room ventilation is usually required. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

WESTCO ZMTI

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Hand protection:

Wear suitable gloves resistant to chemical penetration. Dust impervious gloves. nitrile rubber gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Rubber Apron

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Disposable half mask. Approved respirator. Approved organic vapour respirator

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Colour	: Off-white
Odour	: odourless
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: 0.000000000187 Pa @ 25 ° C
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: 3.07
Auto-ignition temperature	: 287 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Extremely high or low temperatures.

WESTCO ZMTI

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

10.5. Incompatible materials

Strong acids. Strong oxidizers. Nitrates.

10.6. Hazardous decomposition products

None under normal use.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

ATE (oral)	800 mg/kg bodyweight
ATE (dust,mist)	1.5 mg/l/4h

White mineral oil (8042-47-5)

LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 5 mg/l/4h

Zinc 2-mercapto-4(5)-methylbenzimidazole (61617-00-3)

LD50 oral rat	800 mg/kg
ATE (oral)	800 mg/kg bodyweight
ATE (gases)	4500 ppmv/4h
ATE (vapours)	11 mg/l/4h
ATE (dust,mist)	1.5 mg/l/4h

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

White mineral oil (8042-47-5)

NOAEL (chronic, oral, animal/male, 2 years)	> 1200 mg/kg bodyweight No carcinogenic potential observed.
Additional information	Chronic dermal: mouse: Lack of significant effects. Chronic inhalation to various animal species at 5 and 100 mg/m3 doses: no adverse effects.

Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : Not classified
STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

White mineral oil (8042-47-5)

NOAEL (subacute, oral, animal/male, 28 days)	> 1500 mg/kg bodyweight (dog)
--	-------------------------------

Zinc 2-mercapto-4(5)-methylbenzimidazole (61617-00-3)

STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
------------------------	--

Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Likely routes of exposure : Inhalation. Skin and eye contact.
Symptoms/effects : Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation : Harmful if inhaled. Sneezing. May cause irritation of the mucous membranes. Cough. Shortness of breath.
Symptoms/effects after skin contact : May cause an allergic skin reaction. Redness. Skin rash/inflammation. Itching.
Symptoms/effects after eye contact : Tears. Redness. stinging.
Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

WESTCO ZMTI

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 12: Ecological information

12.1. Toxicity

White mineral oil (8042-47-5)	
LC50 fish 1	3841 mg/l Oncorhynchus mykiss
Zinc 2-mercapto-4(5)-methylbenzimidazole (61617-00-3)	
LC50 fish 1	5.6 mg/l 96 h
EC50 crustacea	1.4 mg/l 48 h
EC50 other aquatic organisms 1	6.6 mg/l 72 h algae
NOEC chronic crustacea	0.0346 mg/l 21 d

12.2. Persistence and degradability

WESTCO ZMTI	
Persistence and degradability	Not readily biodegradable. May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

WESTCO ZMTI	
Log Pow	3.07
Bioaccumulative potential	Not established.

12.4. Mobility in soil

WESTCO ZMTI	
Ecology - soil	Not established.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated.

Transport by sea

Transport document description (IMDG) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc 2-mercaptotoluimidazole), 9, III, MARINE POLLUTANT
UN-No. (IMDG) : 3077
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Class (IMDG) : 9 - Miscellaneous dangerous substances and articles
Packing group (IMDG) : III - substances presenting low danger
Limited quantities (IMDG) : 5 kg

Air transport

Transport document description (IATA) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc 2-mercaptotoluimidazole), 9, III
UN-No. (IATA) : 3077
Proper Shipping Name (IATA) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Class (IATA) : 9 - Miscellaneous Dangerous Goods
Packing group (IATA) : III - Minor Danger

WESTCO ZMTI

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

White mineral oil (8042-47-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Zinc 2-mercapto-4(5)-methylbenzimidazole (61617-00-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H-statements:

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Abbreviations and acronyms:

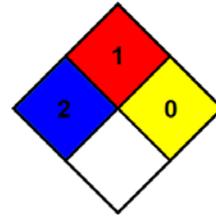
	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CFR: Code of Federal Regulations
	CLP: Classification, Labelling, Packaging.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	PBT: Persistent, Bioaccumulative, Toxic
	TSCA: Toxic Substances Control Act
	TWA: Time Weighted Average
	STEL: Short Term Exposure Limits

WESTCO ZMTI

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

- NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
- NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



Hazard Rating

- Health : 2 Moderate Hazard - Temporary or minor injury may occur
* - Chronic (long-term) health effects may result from repeated overexposure
- Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
- Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
- Personal protection : J
J - Splash goggles, Gloves, Synthetic apron, Dust & vapor respirator

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.