

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : Westco ZMBT
 Synonyms : Zinc di(benzothiazol-2-yl) disulphide / Zinc mercaptobenzothiazole / ZMBT

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Accelerator
 Rubbers
 Restrictions on use : No additional information available

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

Skin sensitisation, Category 1 H317 May cause an allergic skin reaction.

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) : H317 - May cause an allergic skin reaction.

Precautionary statements (GHS) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
 P272 - Contaminated work clothing must not be allowed out of the workplace.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 - If on skin: Wash with plenty of water.
 P321 - Specific treatment (see supplemental first aid instruction on this label).
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P363 - Wash contaminated clothing before reuse.
 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 di(benzothiazol-2-yl) disulphide	(CAS-No.) 155-04-4	80 – 90	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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Name	Product identifier	%	GHS classification
Benzothiazole-2-thiol	(CAS-No.) 149-30-4	10 – 20	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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 you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms, call a doctor.
- 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 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. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Drink plenty of water. Get medical advice/attention if you feel unwell.

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

- Symptoms/effects after inhalation : May cause slight irritation.
- Symptoms/effects after skin contact : May cause slight irritation. Itching. Redness. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : May cause slight irritation.

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 : Foam. Dry powder. Carbon dioxide. Water spray.
- Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical

- Fire hazard : Burning produces irritating, toxic and noxious fumes. Nitrogen oxides. Carbon oxides (CO, CO₂). Sulphur oxides. metallic 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.
- 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 creating or spreading dust. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Use personal protective equipment as required.

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. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Recover the product by vacuuming, shovelling or sweeping. Avoid generating dust.
- Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimise generation of dust. Following recovery, flush area with water. Clean surface thoroughly to remove residual contamination.

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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. Use personal protective equipment as required. Do not breathe dust. Do not get in eyes, on skin, or on clothing.

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

7.2. Conditions for safe storage, including any incompatibilities

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

Incompatible products : Strong oxidizers.

Incompatible materials : Sources of ignition. Direct sunlight.

Prohibitions on mixed storage : Keep/Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Westco ZMBT
No additional information available
Benzothiazole-2-thiol (149-30-4)
No additional information available
Zinc di(benzothiazol-2-yl) disulphide (155-04-4)
No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid creating or spreading dust. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide local exhaust or general room ventilation.

Environmental exposure controls : Prevent leakage or spillage. Prevent contaminated water run-off.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear suitable gloves resistant to chemical penetration. Dust impervious gloves

Eye protection:

Safety glasses with side shields. In case of dust production: protective goggles

Skin and body protection:

Long sleeved protective clothing. Rubber Apron. Tyvek® Gown/Coveralls

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Dust mask

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

Colour : light yellow

Odour : odourless

Odour threshold : No data available

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pH	: No data available
Melting point	: ≥ 300 °C
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	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.63 g/cm ³
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
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

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

None under normal use.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Benzothiazole-2-thiol (149-30-4)	
LD50 oral rat	2830 mg/l
LD50 dermal rabbit	> 7940 mg/kg
Zinc di(benzothiazol-2-yl) disulphide (155-04-4)	
LD50 oral rat	7500 mg/kg
LD50 dermal rabbit	> 7940 mg/kg
ATE (oral)	7500 mg/kg bodyweight

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified

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Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Benzothiazole-2-thiol (149-30-4)	
IARC group	2A - Probably carcinogenic to humans

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Likely routes of exposure : Inhalation. Skin and eye contact.

Symptoms/effects after inhalation : May cause slight irritation.

Symptoms/effects after skin contact : May cause slight irritation. Itching. Redness. May cause an allergic skin reaction.

Symptoms/effects after eye contact : May cause slight irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

Benzothiazole-2-thiol (149-30-4)	
LC50 fish 1	1.32 – 2.73 mg/l 96 h <i>Lepomis macrochirus</i>
EC50 crustacea	4.1 mg/l 48 h
LC50 fish 2	0.42 mg/l 96 h <i>Oncorhynchus mykiss</i>

Zinc di(benzothiazol-2-yl) disulphide (155-04-4)	
LC50 fish 1	0.73 mg/l 96 h <i>Oncorhynchus mykiss</i>
EC50 crustacea	0.71 mg/l 48 h <i>Daphnia magna</i>
NOEC chronic fish	0.041 mg/l 89 d <i>Oncorhynchus mykiss</i>
NOEC chronic crustacea	0.08 mg/l 21 d <i>Daphnia magna</i>

12.2. Persistence and degradability

Westco ZMBT	
Persistence and degradability	May cause long-term adverse effects in the environment.

Zinc di(benzothiazol-2-yl) disulphide (155-04-4)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	2.5 % 14 d

12.3. Bioaccumulative potential

Westco ZMBT	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

Westco ZMBT	
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.

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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. (di(benzothiazol-2-yl) disulphide), 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. (di(benzothiazol-2-yl) disulphide), 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

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

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Benzothiazole-2-thiol	CAS-No. 149-30-4	10 – 20%
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15.2. International regulations

CANADA

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

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

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

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

National regulations

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

Listed on IARC (International Agency for Research on Cancer)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on Taiwan National Chemical Inventory
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Inventory of Existing Chemical Substances Produced or Imported in China (IECSC).
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

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

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Component	State or local regulations
Benzothiazole-2-thiol(149-30-4)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Data sources : TSCA Chemical Substance Inventory. Accessed at <http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>. European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>. ACGIH (American Conference of Government Industrial Hygienists). Manufacturer Information. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. OSHA 29CFR 1910.1200 Hazard Communication Standard. NFPA 400-2013 Hazardous Materials Code.

Other information : None.

Full text of H-statements:

H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

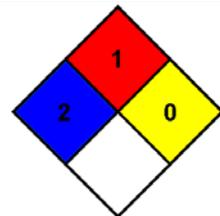
Abbreviations and acronyms:

	CAS (Chemical Abstracts Service) number
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	STEL: Short Term Exposure Limits
	TSCA: Toxic Substances Control Act
	TWA: Time Weighted Average

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

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

SDS Prepared by: The Redstone Group
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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.