

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
 Product name : Westco ZDMC  
 Synonyms : Ziram / Zinc bis dimethyldithiocarbamate / MZ / ZDMC / Zinc dimethyldithiocarbamate

#### 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](http://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 2	H330 Fatal if inhaled.
Serious eye damage/eye irritation, Category 1	H318 Causes serious eye damage.
Skin sensitisation, Category 1	H317 May cause an allergic skin reaction.
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335 May cause respiratory irritation.
Specific target organ toxicity — Repeated exposure, Category 2	H373 May cause damage to organs through prolonged or repeated exposure.
Combustible Dust	May form combustible dust concentrations in air
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) :

Danger

Hazard statements (GHS) :

May form combustible dust concentrations in air  
 H302 - Harmful if swallowed.  
 H317 - May cause an allergic skin reaction.  
 H318 - Causes serious eye damage.  
 H330 - Fatal if inhaled.  
 H335 - May cause respiratory irritation.  
 H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (GHS) :

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.  
 P284 - [In case of inadequate ventilation] wear respiratory 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.

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P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 - Immediately call a poison center or doctor.  
P312 - Call a poison center/doctor if you feel unwell  
P314 - Get medical advice/attention if you feel unwell.  
P320 - Specific treatment is urgent (see supplemental first aid instruction on this label).  
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.  
P363 - Wash contaminated clothing before reuse.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
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
Ziram; zinc bis dimethyldithiocarbamate	(CAS-No.) 137-30-4	98	Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation:dust,mist), H330 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Comb. Dust
White mineral oil	(CAS-No.) 8042-47-5	< 2	Asp. Tox. 1, H304

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. Get medical advice/attention.  
First-aid measures after skin contact : Take off contaminated clothing and wash it before reuse. Wash skin thoroughly with mild soap and water. If skin irritation or rash occurs: Get medical advice/attention.  
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER/doctor if you feel unwell.

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

Symptoms/effects : May cause damage to organs through prolonged or repeated exposure.  
Symptoms/effects after inhalation : Fatal if inhaled. May cause respiratory irritation. Alcohol intolerance.  
Symptoms/effects after skin contact : May cause an allergic skin reaction. Components of the product may be absorbed into the body through the skin.  
Symptoms/effects after eye contact : Causes serious eye damage. Symptoms may include pain, blinking, tears and redness.  
Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Alcohol intolerance. Dizziness, headaches, nausea. Vomiting. May cause a light irritation of the linings of the mouth, throat, and gastrointestinal tract.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

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- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : Combustible Dust. Burning produces irritating, toxic and noxious fumes.  
Explosion hazard : Dust may form explosive mixture in air.

### 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. Avoid static electricity discharges. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance. Do not touch spilled material. 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. Notify authorities if product enters sewers or public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- For containment : Sweep or shovel into suitable containers. Moisten spilled material with water. Prevent runoff from entering drains, sewers or waterways.  
Methods for cleaning up : Isolate area. Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Remove ignition sources. This material and its container must be disposed of in a safe way, and as per local legislation.

### 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. Avoid creating or spreading dust. Do not breathe dust. Do not get in eyes, on skin, or on clothing. 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 container tightly closed. Keep only in the original container.  
Incompatible products : Acids. Peroxides. Halides. Iron. copper. Mercury. Oxidizer.  
Incompatible materials : Sources of ignition. Direct sunlight.  
Heat and ignition sources : Keep away from heat, sparks and flame.  
Storage area : Store in dry, cool, well-ventilated area.  
Special rules on packaging : Do not use metal containers. May be corrosive to some metals. Iron. copper.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

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No additional information available

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### White mineral oil (8042-47-5)

No additional information available

### Ziram; zinc bis dimethyldithiocarbamate (137-30-4)

No additional information available

## 8.2. Appropriate engineering controls

- Appropriate engineering controls : Avoid creating or spreading dust. Avoid dispersal of dust in the air (ie, clearing dust surfaces with compressed air). Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station. Provide local exhaust or general room ventilation.
- Environmental exposure controls : Avoid release to the environment. 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. PVC. rubber

#### Eye protection:

Chemical goggles. face shield

#### Skin and body protection:

Long sleeved protective clothing. Dust-tight suit

#### Respiratory protection:

Wear appropriate mask. Dust mask. In case of inadequate ventilation wear respiratory protection. Full face respirator. Particle filter. Dust production: dust mask with filter type P2. Extra personal protection: P3 filter respirator for toxic particles

### 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	: white
Odour	: odourless
Odour threshold	: No data available
pH	: No data available
Melting point	: 250 °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	: < 0.0000024 hPa @ 25 °C
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.66 g/cm <sup>3</sup> @ 25 °C
Solubility	: Water: 65 mg/l @ 25 °C
Log Pow	: 1.086 @ 25 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available

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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 recommended handling and storage conditions (see section 7).

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Acids. Peroxides. Halides. Mercury. Oxidizer. May be corrosive to some metals. Iron. copper.

### 10.6. Hazardous decomposition products

Thermal decomposition generates : Carbon oxides (CO, CO<sub>2</sub>). Nitrogen oxides. Sulphur oxides. zinc. Zinc oxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

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

ATE (oral)	326.531 mg/kg bodyweight
ATE (dust,mist)	0.071 mg/l/4h

#### White mineral oil (8042-47-5)

LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5 mg/l/4h

#### Ziram; zinc bis dimethyldithiocarbamate (137-30-4)

LD50 oral rat	320 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	0.07 mg/l/4h
ATE (oral)	320 mg/kg bodyweight
ATE (vapours)	0.07 mg/l/4h
ATE (dust,mist)	0.07 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye damage.
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/m <sup>3</sup> doses: no adverse effects.

#### Ziram; zinc bis dimethyldithiocarbamate (137-30-4)

IARC group	3 - Not classifiable
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Reproductive toxicity	: Not classified
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STOT-single exposure : May cause respiratory irritation.

<b>Ziram; zinc bis dimethyldithiocarbamate (137-30-4)</b>	
STOT-single exposure	May cause respiratory irritation.

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

<b>White mineral oil (8042-47-5)</b>	
NOAEL (subacute, oral, animal/male, 28 days)	> 1500 mg/kg bodyweight (dog)

<b>Ziram; zinc bis dimethyldithiocarbamate (137-30-4)</b>	
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 : May cause damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation : Fatal if inhaled. May cause respiratory irritation. Alcohol intolerance.

Symptoms/effects after skin contact : May cause an allergic skin reaction. Components of the product may be absorbed into the body through the skin.

Symptoms/effects after eye contact : Causes serious eye damage. Symptoms may include pain, blinking, tears and redness.

Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Alcohol intolerance. Dizziness, headaches, nausea. Vomiting. May cause a light irritation of the linings of the mouth, throat, and gastrointestinal tract.

## SECTION 12: Ecological information

### 12.1. Toxicity

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

<b>White mineral oil (8042-47-5)</b>	
LC50 fish 1	3841 mg/l <i>Oncorhynchus mykiss</i>

<b>Ziram; zinc bis dimethyldithiocarbamate (137-30-4)</b>	
LC50 fish 1	0.0097 mg/l 96 h <i>Lepomis macrochirus</i>
EC50 crustacea	0.048 mg/l 48 h

### 12.2. Persistence and degradability

<b>Westco ZDMC</b>	
Persistence and degradability	May cause long-term adverse effects in the environment.

<b>Ziram; zinc bis dimethyldithiocarbamate (137-30-4)</b>	
Persistence and degradability	Not readily biodegradable.
Biodegradation	7.7 % 28 d

### 12.3. Bioaccumulative potential

<b>Westco ZDMC</b>	
Log Pow	1.086 @ 25 °C
Bioaccumulative potential	Not established.

<b>Ziram; zinc bis dimethyldithiocarbamate (137-30-4)</b>	
Log Pow	< 3

### 12.4. Mobility in soil

No additional information available

### 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.

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Ecology - waste materials : Hazardous waste due to toxicity. Avoid release to the environment.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2811 Toxic solids, organic, n.o.s. (zinc dimethyl dithiocarbamate), 6.1, II  
UN-No.(DOT) : UN2811  
Proper Shipping Name (DOT) : Toxic solids, organic, n.o.s.  
zinc dimethyl dithiocarbamate  
Transport hazard class(es) (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132  
Packing group (DOT) : II - Medium Danger  
Hazard labels (DOT) : 6.1 - Poison



DOT Packaging Non Bulk (49 CFR 173.xxx) : 212  
DOT Packaging Bulk (49 CFR 173.xxx) : 242  
DOT Packaging Exceptions (49 CFR 173.xxx) : 153  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 25 kg  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 100 kg  
DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.  
Emergency Response Guide (ERG) Number : 154  
Other information : No supplementary information available.

#### Transport by sea

Transport document description (IMDG) : UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (zinc dimethyl dithiocarbamate), 6.1, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS  
UN-No. (IMDG) : 2811  
Proper Shipping Name (IMDG) : TOXIC SOLID, ORGANIC, N.O.S.  
Class (IMDG) : 6.1 - Toxic substances  
Packing group (IMDG) : II - Substances presenting medium danger  
Limited quantities (IMDG) : 500 g

#### Air transport

Transport document description (IATA) : UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (zinc dimethyl dithiocarbamate), 6.1, II, ENVIRONMENTALLY HAZARDOUS  
UN-No. (IATA) : 2811  
Proper Shipping Name (IATA) : TOXIC SOLID, ORGANIC, N.O.S.  
Class (IATA) : 6.1 - Toxic Substances  
Packing group (IATA) : II - Medium 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

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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.

### Ziram; zinc bis dimethyldithiocarbamate (137-30-4)

CERCLA RQ 10 lb

### 15.2. International regulations

#### CANADA

#### White mineral oil (8042-47-5)

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

#### Ziram; zinc bis dimethyldithiocarbamate (137-30-4)

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

Component	State or local regulations
Ziram; zinc bis dimethyldithiocarbamate(137-30-4)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List

## 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.

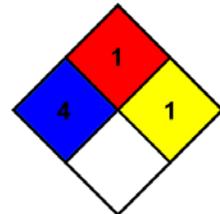
Full text of H-statements:

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

NFPA health hazard : 4 - Materials that, under emergency conditions, can be lethal.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



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### Hazard Rating

- Health : 4 Severe Hazard - Life-threatening, major or permanent damage may result from single or repeated overexposures
- 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 : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.
- Personal protection : X  
X - Special handling directions

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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.*