

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Westco ZDEC
Synonyms : Zinc bis(diethylthiocarbamate) / Zinc Diethylthiocarbamate / Accelerator ZDEC / EZ

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Accelerator
Rubbers
Vulcanising agents
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

Acute toxicity (oral), Category 4	H302 Harmful if swallowed.
Skin corrosion/irritation, Category 2	H315 Causes skin irritation.
Serious eye damage/eye irritation, Category 2A	H319 Causes serious eye irritation.
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.

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) : H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

Precautionary statements (GHS) : 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.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a poison center/doctor if you feel unwell
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

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P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
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
Zinc bis(diethyldithiocarbamate)	(CAS-No.) 14324-55-1	95 – 99	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
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. 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 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. 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 respiratory irritation.

Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye irritation.

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 : 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 : Burning produces irritating, toxic and noxious fumes. Nitrogen oxides. Carbon oxides (CO, CO2). Sulphur oxides. Hydrogen cyanide. 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.

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Wear a self contained breathing apparatus. Wear fire/flammable 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 get in eyes, on skin, or on clothing. Use personal protective equipment as required. Do not breathe dust.

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.

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 ZDEC
No additional information available
White mineral oil (8042-47-5)
No additional information available
Zinc bis(diethyldithiocarbamate) (14324-55-1)
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:

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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. Normal overalls

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
Appearance	: Powder.
Colour	: white Beige
Odour	: slight
Odour threshold	: No data available
pH	: No data available
Melting point	: 170 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 149 °C
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	: 1.48
Density	: 330 – 370 kg/m ³
Solubility	: insoluble in water. Soluble in : Benzene, Carbon disulfide, Soluble in acetone, oils/fats.
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	: Lower explosive limit (LEL): 40 g/m ³
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.

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

ATE (oral)	707.071 mg/kg bodyweight
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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

Zinc bis(diethyldithiocarbamate) (14324-55-1)	
LD50 oral rat	700 mg/kg
LD50 dermal rabbit	3160 mg/kg
ATE (oral)	700 mg/kg bodyweight
ATE (dermal)	3160 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
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 ³ doses: no adverse effects.

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

Zinc bis(diethyldithiocarbamate) (14324-55-1)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

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

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Likely routes of exposure : Inhalation. Skin and eye contact.
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Causes serious eye irritation.
Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

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

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

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Zinc bis(diethyldithiocarbamate) (14324-55-1)	
LC50 fish 1	0.23 mg/l 96 h Oncorhynchus mykiss
EC50 crustacea	0.24 mg/l 48 h Daphnia magna
LC50 fish 2	0.49 mg/l 96 h
NOEC chronic fish	0.0032 mg/l 11 d Danio rerio
NOEC chronic crustacea	0.0032 mg/l 21 d Daphnia magna

12.2. Persistence and degradability

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

Zinc bis(diethyldithiocarbamate) (14324-55-1)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	7.7 % 28 d

12.3. Bioaccumulative potential

Westco ZDEC	
Bioaccumulative potential	Not established.

Zinc bis(diethyldithiocarbamate) (14324-55-1)	
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

Westco ZDEC	
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 bis(diethyldithiocarbamate)), 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 bis(diethyldithiocarbamate)), 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

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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 bis(diethyldithiocarbamate) (14324-55-1)

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
Zinc bis(diethyldithiocarbamate)(14324-55-1)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities

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:

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
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

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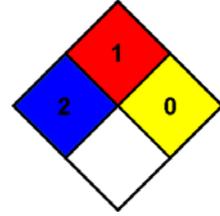
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	STEL: Short Term Exposure Limits
	TSCA: Toxic Substances Control Act
	TWA: Time Weighted Average

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

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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.