

SECTION 1: Identification

1.1. Identification

Product form : Substance
 Substance name : Westco ZBPD
 Synonyms : Zinc dibutyl Dithiophosphate (ZBPD) / ZBPD

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Accelerator
 Rubbers
 Curing agent
 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 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.

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) :

H302 - Harmful if swallowed.
 H315 - Causes skin irritation.
 H317 - May cause an allergic skin reaction.
 H318 - Causes serious eye damage.
 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.
 P310 - Immediately call a poison center or doctor.
 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.

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P333+P313 - If skin irritation or rash occurs: 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

Name : Westco ZBPD

Name	Product identifier	%	GHS classification
Zinc O,O',O',O'-tetrabutyl bis(phosphorodithioate)	(CAS-No.) 6990-43-8	100	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 STOT SE 3, H335 Aquatic Chronic 2, H411

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

3.2. Mixtures

Not applicable

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 : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 : 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. 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 damage. Conjunctivitis. Direct contact may result in corneal injury.
Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms : Long exposure to low concentrations may lead to dermatitis, bronchitis and conjunctivitis.

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.
Unsuitable extinguishing media : Do not use water.

5.2. Specific hazards arising from the chemical

Fire hazard : Burning produces irritating, toxic and noxious fumes. Hydrogen sulfide. Sulphur oxides. Carbon oxides (CO, CO2). Phosphorus oxides. Zinc oxide. Zinc sulphide.

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.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not breathe aerosol. Do not get in eyes, on skin, or on clothing. Use personal protective equipment as required. Avoid contact with skin, eyes and clothing. Do not breathe vapour.

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 : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Put into a labelled container and provide safe disposal.
Other information : Ventilate area.

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. Avoid creating or spreading dust. Use only outdoors or in a well-ventilated area. Do not breathe dust. Do not breathe fumes. 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. Wash contaminated clothing 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. Water. Moisture.
Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Westco ZBPD
No additional information available
Zinc O,O,O',O'-tetrabutyl bis(phosphorodithioate) (6990-43-8)
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.

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

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Eye protection:

Chemical goggles

Skin and body protection:

Wear suitable protective clothing. Tyvek® Gown/Coveralls

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Dust mask. If needed, use an air-purifying respirator with organic vapor cartridges and a dust/mist prefilter.

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	: Liquid
Appearance	: Transparent.
Colour	: amber light yellow
Odour	: odourless
Odour threshold	: No data available
pH	: ≥ 4
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: $\geq 180\text{ }^{\circ}\text{C}$
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	: 1.25
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

Reacts with water. May release poisonous hydrogen sulfide.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

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

Acids. Water. Moisture.

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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)	1800 mg/kg bodyweight
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Zinc O,O,O',O'-tetrabutyl bis(phosphorodithioate) (6990-43-8)

LD50 oral rat	1800 mg/kg
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LD50 dermal rabbit	5010 mg/kg
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LC50 inhalation rat (mg/l)	> 2.3 mg/l/4h
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ATE (oral)	1800 mg/kg bodyweight
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ATE (dermal)	5010 mg/kg bodyweight
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Skin corrosion/irritation : Causes skin irritation.

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

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

Zinc O,O,O',O'-tetrabutyl bis(phosphorodithioate) (6990-43-8)

STOT-single exposure	May cause respiratory irritation.
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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 respiratory irritation.

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

Symptoms/effects after eye contact : Causes serious eye damage. Conjunctivitis. Direct contact may result in corneal injury.

Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

Chronic symptoms : Long exposure to low concentrations may lead to dermatitis, bronchitis and conjunctivitis.

SECTION 12: Ecological information

12.1. Toxicity

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

Zinc O,O,O',O'-tetrabutyl bis(phosphorodithioate) (6990-43-8)

LC50 fish 1	49 mg/l 96 h <i>Salmo gairdneri</i>
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EC50 crustacea	7.3 mg/l 48 h <i>Daphnia magna</i>
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NOEC chronic crustacea	0.26 mg/l 21 d <i>Daphnia magna</i> (read-across)
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12.2. Persistence and degradability

Westco ZBPD

Persistence and degradability	May cause long-term adverse effects in the environment.
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Zinc O,O,O',O'-tetrabutyl bis(phosphorodithioate) (6990-43-8)

Persistence and degradability	Not readily biodegradable.
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Biodegradation	7 % 28 d
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12.3. Bioaccumulative potential

Westco ZBPD	
Bioaccumulative potential	Not established.
Zinc O,O,O',O'-tetrabutyl bis(phosphorodithioate) (6990-43-8)	
Log Kow	< 3
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

Westco ZBPD	
Ecology - soil	Not established.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Incinerate at a licensed installation.
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 O,O,O',O'-tetrabutyl bis(phosphorodithioate)), 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 O,O,O',O'-tetrabutyl bis(phosphorodithioate)), 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

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

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Zinc O,O',O',O'-tetrabutyl bis(phosphorodithioate) (6990-43-8)

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.

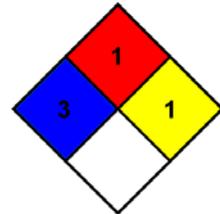
Full text of H-statements:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

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.



Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

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

SDS Prepared by: The Redstone Group, dba SafeBridge Consultants, Inc.

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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.