



Safety Data Sheet (SDS)

Revision 1 Review Date: 3/1/16

1. Chemical Product and Company Identification

Product Name:	ZDEC
Distributed By:	HB Chemical 1665 Enterprise Parkway Twinsburg Oh 44087 Phone - 330-920-8023
MSDS Prepared By (w Suppliers Input):	HB Chemical
Chemical Name / Family:	Zinc Bis(Diethyldithiocarbamate)
CAS No:	14324-55-1
EC No:	238-270-9
REACH:	Not Available
Product Use:	Rubber accelerator
OSHA Status	Hazardous

For emergency health, safety, and environmental information, calls 330-920-8023

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300

2. Hazard(s) Identification

Classification:

Classification according to Regulation (EC) No 1272/2008: The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H400, H 410.



GHS09 Environment

Aquatic Acute 1 H400 Very toxic to aquatic life

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox 4 H302 Harmful if swallowed

Skin Irrit 2 H315 Causes skin irritation.

Eye Irrit 2 H319 Causes serious eye irritation

Skin Sens 1 H 317 May cause an allergic skin reaction

Classification according to Directive 67/548/EEC or Directive 1999/45/EC:

XN Sensitizing R42/43 May cause sensitization by inhalation and skin contact.

Xi Irritant R36/37/38 irritating to eyes, respiratory system and skin
N Dangerous for the environment R50/53 very toxic to aquatic organisms: may cause long-term adverse effect in the aquatic environment.

Hazard Pictograms:

regulation and not the US GHS regulation: H400.

The following Hazard Statements are applicable only to the EU



Signal Words:

Warning

H302: Harmful if swallowed.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statement:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P264: Wash hands 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 should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED:

Call a POISON CENTER Or doctor/physician if you feel unwell.

IF ON SKIN:

Wash with plenty of soap and water.

IF INHALED:

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Call a POISON CENTER or doctor/physician if you feel unwell. : Rinse mouth.

If skin irritation occurs: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Take off contaminated clothing and wash before reuse.

Wash contaminated clothing before reuse.

Collect spillage.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in according with local regulation.

3. Composition / Information on Ingredients

Ingredient(s):

Chemical Name	Registration No.	CAS No.	EC No.	Concentration
Zinc bis(diethyldithiocarbamate)	N/A	14324-55-1	238-270-9	97%

4. First Aid Measures

Inhalation:

Move exposed person to fresh air. Keep person warm and at rest. If not breathing, or if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Eyes:

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention

Skin:

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Ingestion:

Wash out mouth with water. Move exposed person to fresh air. If material has been swallowed and the exposed person is conscious, give plenty of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed:

Harmful if swallowed. Causes serious eye irritation. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction.

Indication of any immediate medical attention and Special treatment needed:

If skin irritation or rash occurs, get medical advices/ attention.

5. Fire-Fighting Measures

Suitable Extinguishing Media:

Water Spray (fog), Dry Chemical, Carbon Dioxide CO2, Foam

Unsuitable Extinguishing Media:

High volume water jet.

Special Fire Fighting Procedures:

Wear full protection clothing and a NIOSH- approved self-contained breathing apparatus with full face pieces operated in the pressure demand or other positive pressure mode.

Special hazards arising from the substance or mixture:

Heating or fire can release toxic gas: Carbon oxides, nitrogen oxides, sulfur oxides.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Avoid the generation of dust. Avoid contact with skin, eyes and clothing. Use suitable eye protection. Wear suitable coveralls to prevent exposure to the skin.

For emergency responders:

Wear an appropriate NIOSH/MSHA approved respirator if dust is generated.

Environmental Precautions:

Very toxic to aquatic organisms. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for Containment and Cleaning up:

Large spill: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum, sweep up and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
Small spill: Move containers from spill area. Vacuum or sweep up and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

Reference to other sections:

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment. See Section 13 for information on disposal.

Additional information:

Not applicable.

7. Handling and Storage:

Precautions for safe handling:

Protective measures:

Avoid contact with eyes and skin. Avoid breathing dust. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Advice on general occupational hygiene:

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities:

Store in accordance with local regulations. Store in a dry and cool place. Keep container tightly closed until ready for use.

Containers that have been opened should be carefully closed. Do not store in un-labelled containers. Use appropriate containment to avoid environmental contamination. Packaging materials: Recommended: Use original container. Do not store near acids or oxidizers.

8. Exposure Controls / Personal Protection

<u>Control parameters:</u>	Occupational exposure limits: Not available. Additional exposure limits under the conditions of use: Not available.
<u>DNEL/DMEL and PNEC-Values:</u>	Not available.
<u>Exposure Controls:</u> <u>Appropriate engineering controls:</u>	Where exposure limits apply to this product or its ingredients, personal , workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
<u>Respiratory Protection:</u>	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard (conforming to EN140 with Type A/P2 filter or better [PPE29]) if a risk assessment indicates this is necessary.
<u>Thermal hazards:</u>	Wear suitable protective clothing to prevent heat.
<u>Protective Gloves:</u>	Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls. Suitable glove materials include e.g.: Nitrile rubber coated textile gloves. Minimum breakthrough time / gloves: 480 min; Minimum thickness / gloves: 0.4mm
<u>Eye Protection:</u>	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: Tightly-fitting safety goggles with side-shields, face-shield.
<u>Environmental exposure controls:</u>	Avoid discharge into the environment. According to local regulations, federal and official regulations.

9. Physical and Chemical Properties

<u>Appearance:</u>	Solid
<u>Colour:</u>	White to off-white
<u>Odour:</u>	Not available
<u>Odour threshold:</u>	Not available
<u>pH:</u>	Not available
<u>Melting point/range (°C):</u>	172-183°C /101.325kPa

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<u>Boiling point/range (°C) :</u>	301 °C/1013hPa
<u>Flash point (°C):</u>	Not available
<u>Evaporation rate:</u>	Not available
<u>Flammability limit - lower (%):</u>	Not available
<u>Flammability (solid, gas):</u>	Not readily combustible solid
<u>Ignition temperature (°C):</u>	Not available
<u>Upper/lower flammability/explosive limits:</u>	Not available
<u>Vapour pressure (20°C):</u>	Not available
<u>Vapour density:</u>	Not available
<u>Relative Density:</u>	Not available
<u>Bulk density (kg/m³):</u>	1480kg/m ³
<u>Water solubility (g/l):</u>	1.06mg/l(20 °C)
<u>n-Octanol/Water (log Po/w):</u>	Not available.
<u>Auto-ignition temperature:</u>	Not available
<u>Decomposition temperature:</u>	Not available
<u>Viscosity, dynamic (mPa.s):</u>	Not available
<u>Explosive properties:</u>	Not explosive
<u>Oxidising properties:</u>	Not oxidising
<u>Molecular Formula:</u>	C10H20N2S4Zn
<u>Molecular Weight:</u>	361.93
<u>Other information:</u>	
Fat solubility(solvent– oil to be specified)etc:	Not available
Surface tension:	Not available
Dissociation constant in water(pKa):	Not available
Oxidation-reduction Potential:	Not available
Specific gravity :	Not available

10. Stability and Reactivity

<u>Reactivity:</u>	The substance is stable under normal storage and handling conditions.
<u>Stability:</u>	Stable at room temperature in closed containers under normal storage and handling conditions.
<u>Incompatibility (Materials to Avoid):</u>	Acids, oxidizing agents.
<u>Conditions to Avoid:</u>	Incompatible materials Keep away from heat, sparks and flames.
<u>Possibility of hazardous reactions:</u>	Reacts with acids under release of toxic and highly flammable carbon disulfide.
<u>Hazardous decomposition products:</u>	Carbon oxides, nitrogen oxides, hydrogen cyanide, zinc oxide fumes.

11. Toxicological Information

<u>Toxicokinetics, metabolism and distribution:</u>	
<u>Non-human toxikological data:</u>	Not available

Information on toxicological effects:

<u>Acute toxicity:</u>	LD50(Oral, Rat):1960 mg/kg bw LD50(Dermal, Rabbit): >2000 mg/kg bw LC50(Inhalation, Rat): Not available
<u>Skin corrosion/Irritation:</u>	Causes skin irritation.
<u>Serious eye damage/irritation:</u>	Causes serious eye irritation.
<u>Respiratory or skin sensitization:</u>	May cause an allergic skin reaction.
<u>Germ cell mutagenicity:</u>	Not classified
<u>Carcinogenicity:</u>	Not classified
<u>Reproductive toxicity:</u>	Not classified
<u>STOT- single exposure:</u>	May cause respiratory irritation.
<u>STOT-repeated exposure:</u>	Not classified.

12. Ecological Information

Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	0.42mg/l	24h	Fish	OECD 203	N/A	N/A
LC50	0.24mg/l	48h	Daphnia	OECD 202	N/A	N/A
EC50	1.1 mg/l	96h	Algae	OECD 201	N/A	N/A

<u>Persistence and degradability:</u>	Not available.
<u>Bioaccumulative potential:</u>	Not available.
<u>Mobility in soil:</u>	Not available.
<u>Results of PBT&vPvB assessment:</u>	Not available.
<u>Other adverse effects:</u>	Not available.

13. Disposal Considerations

<u>Waste treatment methods:</u>	The material should be disposed of by incineration in a chemical incinerator in compliance with national and regional requirements.
<u>Product / Packaging disposal:</u>	If empty container retains product residues, all label precautions must be observed. Return for reuse or dispose according to national or local regulations.

14. Transport Information

D.O.T. Shipping Name

Not Regulated

Air - ICAO (international Civil Aviation Organization)

UN Number: 3077

UN Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.,(Zinc bis(dibutyldithiocarbamate))
Class: 9 Packaging group: III Environmental hazards: Yes

Sea - IMDG (International Maritime Dangerous Goods)

UN Number: 3077

UN Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.,(Zinc bis(dibutyldithiocarbamate))
Class: 9 Packaging group: III Environmental hazards: Yes

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture United States.

SARA Section 355 (extremely hazardous substances)	Substance is not listed.
SARA Section 313 (Specific toxic chemical listings)	Zinc Compound.
TSCA (Toxic Substances Control Act)	Substance is listed.
Proposition 65 (California)	
Chemicals known to cause cancer	Substance is not listed.
Chemicals known to cause reproductive toxicity for females	Substance is not listed.
Chemicals known to cause reproductive toxicity for males	Substance is not listed.
Chemicals known to cause developmental toxicity	Substance is not listed.
Carcinogenic Categories	
EPA (Environmental Protection Agency)	Substance is not listed.
IARC (International Agency for Research on Cancer)	Substance is not listed.
TLV (Threshold Limit Value established by ACGIH)	Substance is not listed.
NIOSH-Ca (National Institute for Occupational Safety and Health)	Substance is not listed.
OSHA-Ca (Occupational Safety & Health Administration)	Substance is not listed.
Canada	
Canadian Domestic Substances List (DSL)	Substance is listed.
Canadian Ingredient Disclosure list (limit 0.1%)	Substance is not listed.
Canadian Ingredient Disclosure list (limit 1%)	14324-55-1,zinc bis (diethyldithiocarbamate)

Chemical Safety assessment: A Chemical safety assessment has not been carried out.

16. Other Information

The above information has been compiled from what we believe to be credible sources. To our knowledge the information is accurate and reliable, however, it is not guaranteed. Any recommendations issued by HB Chemical personnel or literature is derived from experience and by no means should be taken as fact or construed as a recommendation to violate of any law, regulation or patent. It is the users responsibility to determine the suitability of any HB supplied material in their application. The individual conditions of each customer are well outside of our control and we cannot be held liable for its functionality and use. Please contact our office should you need specific information beyond what is supplied above. As with all Chemical usage safety precautions beyond the stated are highly recommended.