SAFETY DATA SHEET

Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Version 2 **Issue Date** 04-Feb-2016
Product Name Rubber Accelerator ZDMC **Revision date** **08-July-2024**

SECTION 1: Identification of the substance /mixture and of the company/undertaking

1.1. Product identifier

Product Name	Rubber Accelerator ZDMC (PZ)
Substance Name	Zinc dimethyl dithiocarbamate
Synonym	Ziram
CAS No	137-30-4
EC No	205-288-3
Index No	006-012-00-2
REACH registration number	Not available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use	Rubber vulcanization accelerator for synthetic rubber
Uses advised against	No information available

1.3. Details of the supplier of the safety data sheet

Only representative	REACH24H CONSULTING GROUP
Address	Paramount Court, Corrig Road, Sandyford, Dublin 18, Ireland
E-mail	reach@reach24h.com
Only representative	REACH24H CONSULTING GROUP
Address	Paramount Court, Corrig Road, Sandyford, Dublin 18, Ireland
E-mail	reach@reach24h.com
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Address	Paramount Court, Corrig Road, Sandyford, Dublin 18, Ireland
E-mail	reach@reach24h.com
Importer	
Address	
Postal Code	
Phone	
FAX	
E-mail	

1.4. Emergency telephone number

In China: +86-393-4840366 (Office hours available)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity – Oral, Category 4 - H302
Acute toxicity - Inhalation (Dusts/Mists), Category 2 - H330
Serious eye damage/eye irritation, Category 1 - H318
Skin sensitization, Category 1 - H317
Specific target organ toxicity (single exposure), Category 3 - H335
Specific target organ toxicity (repeated exposure), Category 2 - H373
Hazardous to the aquatic environment — Acute Hazard, Category 1 - H400 (M=100)
Hazardous to the aquatic environment — Chronic Hazard, Category 1 - H410 (M=100)

2.2. Label elements

Symbols/Pictograms



Signal word: Danger

Hazard Statements:
H302 - Harmful if swallowed
H330 - Fatal if inhaled
H318 - Causes serious eye damage
H317 - May cause an allergic skin reaction
H335 - May cause respiratory irritation
H373 - May cause damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements:
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.
P301 + P312: IF SWALLOWED: Call a POISON CENTER/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.
P314: Get medical advice/attention if you feel unwell.
P330: Rinse mouth.
P333 + P313: If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364: Take off contaminated clothing and wash it before reuse.
P391: Collect spillage.
P403 + P233: Store in a well-ventilated place. keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/container in accordance with local regulation.

EU Specific Hazard Statements: None.

2.3. Other hazards

This substance does not meet the PBT criteria of REACH regulation, annex XIII
This substance does not meet the vPvB criteria of REACH regulation, annex XIII
The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1 Substance

Chemical Name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Zinc dimethyl	205-288-3	137-30-4	⩾97.0 %	Acute Tox. 4 (H302)

dithiocarbamate (ZDMC)				Acute Tox. 2 (H330) Eye Dam. 1 (H318) Skin Sens. 1 (H317) STOT SE 3 (H335) STOT RE 2 (H373) Aquatic Acute 1 (H400) (M=100) Aquatic Chronic 1 (H410) (M=100)

Remark: The rest unspecified ingredients are impurities, and they are not hazard.

3.2 Mixture
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures
General advice
In all cases of doubt, or when symptoms persist, seek medical attention.

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. Immediate medical attention is required.

Skin Contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion
Drink plenty of water. Do NOT induce vomiting. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed
Fatal if inhaled. Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure. May cause respiratory irritation. Causes serious eye damage. May cause an allergic skin reaction.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.
Treatment may vary with condition of victim and specifics of incident.
Persons with pre-existing skin, eye, or respiratory disease may be at increased risk from the irritant or allergic properties of this material. Attending physician should treat exposed patients symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media Carbon dioxide (CO_2), water spray (fog), powder, foam.
Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture
Thermal decomposition can lead to release of irritating and toxic gases and vapors, such as carbon oxides, sulfur oxides, nitrogen oxides, zinc oxides.

5.3. Advice for firefighters
Do not stay in dangerous zone without self-contained breathing apparatus.

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Avoid generation of dust. Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protection recommended in Section 8.

6.2. Environmental precautions

Local authorities should be advised if significant spillages cannot be contained. Prevent entry into waterways, sewers, basements or confined areas.

6.3. Methods and material for containment and cleaning up

Personal protection: P3 filter respirator for toxic particles.
Do NOT let this chemical enter the environment.
Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting.
Carefully collect remainder, then remove to safe place.

6.4. Reference to other sections

See Section 7 for more information
See section 8 for more information
See section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Take precautionary measures against static discharges. Avoid generation of dust. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Use personal protection recommended in Section 8.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Store away from strong oxidizing materials. Avoid exposure to direct sunlight. Keep locked up and out of reach of children. Keep away from food, drink and animal feeding stuffs. Store in accordance with local regulations.

7.3. Specific end use(s)

Apart from the uses mentioned in SECTION 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical Name	Latvia	France	Finland	Germany	Italy
Zinc dimethyl dithiocarbamate (CAS #: 137-30-4)		-	-	TWA: 0.01 mg/m^3 Ceiling / Peak: 0.02 mg/m^3	-

Derived No Effect Level (DNEL)

No information available
No chemical safety assessment has been carried out

Predicted No Effect Concentration (PNEC)

No information available

No chemical safety assessment has been carried out

8.2. Exposure controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations. Remove all sources of ignition.

Personal protective equipment

Eye/face protection	Sufficient eye protection must be worn. Wear chemical safety goggles.
Hand Protection	Use protective gloves. The glove material must be sufficiently impermeable and resistant to the substance. Check the tightness before wear. Gloves should be well cleaned before being removed, then stored in a well-ventilated location. Pay attention to skin care. Textile or leather gloves are completely unsuitable. The following materials are suitable for protective gloves: Polyvinyl chloride - PVC, rubber.
Skin and body protection	Suitable protective clothing.
Respiratory protection	In an emergency (e.g.: unintentional release of the substance) respiratory protection must be worn. Consider the maximum period for wear. Respiratory protection: Particle filter P2 or P3, color code white.
Thermal hazards	No information available.

Environmental exposure controls

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid, powder or granule
Color	White
Odor	Odorless
Odor Threshold	Not determined
pH	Not determined
Melting point/freezing point	250 °C
Boiling point/boiling range	Not applicable (decomposition from ca. 250 °C)
Flammability	Not flammable
Explosive limits	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not determined
Viscosity, kinematic	Not applicable
Solubility	Water: 0.97 mg/L (20°C)
Partition coefficient n-octanol/water (LogPow)	1.65 (20 °C)
Vapor Pressure	1.8x10E-5 Pa (20°C)
Density/relative density	1.71 (20°C)
Relative Vapor density	Not applicable
Particle characteristics	D50 = 2.33 µm
Explosive properties	Not an explosive
Oxidizing properties	Not an oxidizer

9.2. Other information

Information with regard to physical hazard classes

No data available

Other safety characteristics

No information available

SECTION 10: Stability and reactivity

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

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
The substance decomposes on heating and on burning producing toxic and irritating fumes. The substance decomposes on contact with acids.

10.4. Conditions to avoid
Heat, flames and sparks. Exposure to light. Incompatible materials.

10.5. Incompatible materials
Oxidizing agents, acids, bases, acid halides, mercury.

10.6. Hazardous decomposition products
Carbon oxides, sulfur oxides, nitrogen oxides, zinc oxides.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity
Harmful if swallowed. Fatal if inhaled.

Zinc dimethyl dithiocarbamate (CAS #: 137-30-4)	
LD50 oral rat	320 mg/kg
LD50 dermal rabbit	> 2 000 mg/kg
LC50 Inhalation - Rat	0.13 mg/L/4h

Skin corrosion/irritation
Non-irritating to the skin.

Serious eye damage/eye irritation
Causes serious eye damage, rabbit.

Sensitization
May cause an allergic skin reaction, guinea pig.

Germ cell mutagenicity
Negative.

Carcinogenicity
Not classified

Zinc dimethyl dithiocarbamate (CAS #: 137-30-4)	
IARC group	3 - Not classifiable

Reproductive toxicity
Not classified

Zinc dimethyl dithiocarbamate (CAS #: 137-30-4)	
NOAEL (animal/female, F0/P)	10 mg/kg Rat

STOT - single exposure
May cause respiratory irritation.

STOT - repeated exposure
May cause damage to organs through prolonged or repeated exposure.
Affected organs: red blood cells
Route of exposure: oral

Zinc dimethyl dithiocarbamate (CAS #: 137-30-4)	
LOAEL (oral, rat, 90 days)	≈ 7.4 mg/kg rat OECD 408
LOAEL (dermal, rat/rabbit, 90 days)	300 mg/kg rabbit OECD 410
NOAEL (oral, rat, 90 days)	< 7.4 mg/kg rat OECD 408
NOAEL (dermal, rat/rabbit, 90 days)	100 mg/kg rabbit OECD 410

Aspiration hazard
Not classified.

11.2. Information on other hazards

Endocrine disrupting properties
The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

Other information
No information available.

SECTION 12: Ecological information

12.1. Toxicity

Very toxic to aquatic life with long lasting effects.

Zinc dimethyl dithiocarbamate (CAS #: 137-30-4)	
LC50 96h - Fish	0.01 mg/l Lepomis macrochirus
LC50 96h - Fish	1.2 mg/l Lepomis macrochirus [static]
EC50 48h - Crustacea	0.048 mg/l Daphnia magna
EC50 72h - Algae	0.0733 mg/L Pseudokirchnerella subcapitata
NOEC chronic Crustacea	78 µg/L Daphnia magna (21d)
NOEC chronic fish	101 µg/L Pimephales promelas (33d)

12.2. Persistence and degradability

Not readily biodegradable.

Zinc dimethyl dithiocarbamate (CAS #: 137-30-4)	
Biodegradation	7.7%, 28d

12.3. Bioaccumulative potential

Low bioaccumulation potential

Zinc dimethyl dithiocarbamate (CAS #: 137-30-4)	
Partition coefficient (Log Pow)	1.65 (20 °C)

12.4. Mobility in soil

Log Koc: 2.5 - 4

12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Endocrine disrupting properties

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12.7. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14: Transport information

14.1 UN number or ID number	2811
14.2. UN proper shipping name	TOXIC SOLID, ORGANIC, N.O.S. (Zinc dimethyl dithiocarbamate)
14.3. Transport hazard class(es)	6.1
14.4. Packing group	II
14.5. Environmental hazards	Marine pollutant
14.6. Special precautions for user	No information available
14.7 Maritime transport in bulk according to IMO instruments	Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

No REACH Annex XVII restrictions
Not on the REACH Candidate List
Not on the REACH Annex XIV List
Not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 july 2012 concerning the export and import of hazardous chemicals.
Not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

National regulations

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on KECL/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 the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Germany
Water hazard class (WGK) WGK 3, Highly hazardous to water (Classification according to AwSV)

15.2. Chemical safety assessment
No chemical safety assessment has been carried out

SECTION 16: Other information
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Data sources	LOLI, ECHA
Issue Date	04-Feb-2016
Revision date	08-July-2024

Key or legend to abbreviations and acronyms used in the safety data sheet
TWA - TWA (time-weighted average)
STEL - STEL (Short Term Exposure Limit)
Ceiling - Maximum limit value
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

Full text of H-Statements referred to under section 3
H302 - Harmful if swallowed
H330 - Fatal if inhaled
H318 - Causes serious eye damage
H317 - May cause an allergic skin reaction
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

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

-------- End of Safety Data Sheet --------