

PERKACIT ZDMC pdr and pdr-d

1. IDENTIFICATION OF THE SUBSTANCE OR PREPARATION AND THE COMPANY / UNDERTAKING

Product label name	Zinc dimethyldithiocarbamate
Supplier / manufacturer	Performance Additives Italy S.p.A. Zona Industriale "A" 86039 Termoli (CB) Italy Tel. +39 0875 58941
Emergency Telephone	+49 40 30 299 - 0 (only during office hours, Behn Meyer Europe GmbH, Ballindamm 1, D-20095 Hamburg)
Intended use	Vulcanization accelerator

2. COMPOSITION / INFORMATION ON INGREDIENTS

This product is to be considered as a substance in conformance to EC directives.
Information on hazardous ingredients

Chemical description Zinc dimethyldithiocarbamate

Composition / information on ingredients

Number	% w/w	CAS-Number	Chemical name	
1	>98	137-30-4	Zinc dimethyldithiocarbamate	
Number	EC-number	Annex-1 number	Symbols (EU Classification)	Risk-phrases
1	205-288-3	006-012-00-2	T+, N, Xn, Xi	R22 R26 R37 R41 R43 R48/22 R50/53

Other Information Formula: C₆H₁₂N₂S₄Zn.

3. HAZARDS IDENTIFICATION

Harmful if swallowed.
Very toxic by inhalation.
Irritating to respiratory system.
Risk of serious damage to eyes.
May cause sensitization by skin contact.
Harmful: danger of serious damage to health by prolonged exposure if swallowed.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Symptoms and effects	Very toxic by inhalation. May cause alcohol intolerance. Harmful if swallowed. Irritating to eyes, respiratory system and skin.
First aid	
General	Do not drink alcohol after exposure.
Inhalation	Move to fresh air. If symptoms persist, seek medical advice.
Skin	Remove all contaminated clothing immediately. Wash off with plenty of soap and water. Seek medical advice if irritation develops. Launder clothes before reuse.
Eye	Rinse immediately and as long as possible with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation persists.
Ingestion	Only when conscious, rinse mouth, give plenty of water to drink. DO NOT induce vomiting. Seek medical advice.
Advice to physician	No specific recommendations.

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5. FIRE-FIGHTING MEASURES

Extinguishing media	In case of fire, use water spray / mist, foam, dry chemical powder.
Unsuitable extinguishing media	Water jet.
Special exposure hazards	None known.
Hazardous decomposition / combustion products	Emits toxic fumes under fire conditions: hydrogen cyanide (HCN), sulphur dioxide (SO ₂), nitrous gases (NO _x).
Protective equipment	Wear self contained breathing apparatus.
Other Information	Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	For personal protection see Section 8. Avoid dust generation.
Environmental precautions	Do not flush into public water courses.
Methods for cleaning up	Collect as much as possible in a clean container for (preferable) reuse or disposal.

7. HANDLING AND STORAGE

Handling	Do not breathe dust. Avoid contact with skin and eyes.
Fire and explosion prevention	Avoid dust accumulation. Dust/air mixtures may ignite violently upon exposure to sparks or sources of ignition. Kst: 153 bar.m/s. Maximum corrected explosion pressure: 7.7 bar.
Storage requirements	Store in a dry and cool place.
Other information	Contributes to a major hazard site.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering controls	Avoid dust generation. Ensure good ventilation and local exhaustion of the working area.
Exposure limits	With the exception of The Netherlands and Sweden (Exposure limits = 1 mg/m ³): No exposure limit has been established.
Name	
Zinc dimethyldithiocarbamate	In this country no exposure limit has been established
Personal protection	
Respiratory	Avoid breathing dust. In case of insufficient ventilation wear suitable respiratory equipment, respirator with Filter P3.
Hand	Wear protective gloves.
Eye	Wear safety goggles.
Skin	Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	powder
Colour	white, cream
Odour	odourless
Boiling point / range	not relevant
Melting point / range	min. 240 °C
Flash point	approx. 200 °C
Flammability	not determined
Autoignition temperature	400 °C

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Explosive properties	dust explosion hazard
Explosion limits	Lower Explosion Limit (LEL): 40 g/m ³ . Minimum ignition energy: =< 10 mJ.
Oxidising properties	not applicable
Vapour pressure	negligible at room temperatures
Density	1700 kg/m ³ (20 °C)
Bulk density	330-370 kg/m ³
Solubility in water	practically insoluble
Solubility in other solvents	acetone, alcohols, benzene
pH value	not determined
Partition coefficient n-octanol / water	not determined
Relative vapour density (air=1)	not applicable
Viscosity	not applicable

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid	No specific recommendations.
Materials to avoid	Oxidizing agents. Strong acid.
Hazardous decomposition products	No hazardous decomposition products known.
Other information	During the vulcanization process, traces of carcinogenic N-nitrosamines may be formed from decomposition products (amines) in the presence of nitrosating agents.

11. TOXICOLOGICAL INFORMATION

Name	Zinc dimethyldithiocarbamate
Acute toxicity	
Oral LD50	rat: >1270 mg/kg.
Dermal LD50	rabbit: >2000 mg/kg.
Inhalation LC50	rat; 4 hours: 0.026-0.081 mg/l.
Irritation	
Skin	non-irritating
Eye	severely irritating
Respiratory	irritating
Sensitization	sensitizing (Lit.)
Genotoxicity	EEC category 3 mutagen: substance which causes concern for man owing to its possible mutagenic effects.

12. ECOLOGICAL INFORMATION

Name	Zinc dimethyldithiocarbamate
Ecotoxicity	
Fish	96h-LC50 (Poecilia reticulata): 0.75 mg/l (Lit.). No Observed Effect Concentration (NOEC) (Danio rerio): <0.032 mg/l.
Daphnia	48h-EC50 (Daphnia magna): 0.14 mg/l (Lit.).
Algae	96h-EC50 (Chlorella pyrenoidosa): 1.2 mg/l.

13. DISPOSAL CONSIDERATIONS

Product	Avoid discharge into the environment. This material and its container must be disposed of as hazardous waste.
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	Small quantities: According to local regulations. Large quantities: Consult Performance Additives for special advice.
Contaminated packaging	According to local regulations.
Other information	Water code number: Please refer to your specific industry in the European Waste Catalogue.

14. TRANSPORT INFORMATION

Land transport

ADR class	6.1	ADR / RID packing group	I
RID class	6.1	Substance Identification No.	2811
Hazard Identification No.	66	UN number	2811
TREM-Card	Yes		
Proper Shipping Name	Toxic solid, organic, n.o.s. (zinc dimethyldithiocarbamate)Токсическое твердое вещество, органическое, N.O.S. (Диметилдителиокарбамат цинка)		

Sea transport (IMDG-code / IMO)

IMO / IMDG code		Class	6.1
Packing group	I	UN number	2811
EMS	F-A, S-F	Subsidiary Risk	
Marine pollutant	yes		
Proper Shipping Name	Toxic solid, organic, n.o.s. (zinc dimethyldithiocarbamate)		

Air transport (ICAO-TI / IATA-DGR)

ICAO-TI/IATA-DGR		UN number	2811
Class	6.1	Packing group	I
Proper Shipping Name	Toxic solid, organic, n.o.s. (zinc dimethyldithiocarbamate)		

15. REGULATORY INFORMATION

Chemical description Zinc dimethyldithiocarbamate

Labelling according to EC directives

EC-number see section 3
Classification based on Annex-1 to directive 67/548/EEC



Symbols (EU classification)

VERY TOXIC (T+)

DANGEROUS FOR THE ENVIRONMENT (N)

R(isk) phrases (EU classification)

R 22 Harmful if swallowed
R 26 Very toxic by inhalation
R 37 Irritating to respiratory system
R 41 Risk of serious damage to eyes
R 43 May cause sensitization by skin contact
R 48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S(afety) phrases (EU classification)

S 22 Do not breathe dust

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006

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S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S 28 After contact with skin, wash immediately with plenty of soap and water
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
S 60 This material and its container must be disposed of as hazardous waste
S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets
To be displayed on the label: "EC label".
Substance and/or product listed in Directive 96/82/EC.
3 (VwVwS Anhang 3)

Other information**German Water Hazard Class (WGK)**

16. OTHER INFORMATION

This information only concerns the above-mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

R-phrases information**Chemical name**

Zinc dimethyldithiocarbamate

Risk-phrases

R22 R26 R37 R41 R43 R48/22 R50/53

Harmful if swallowed Very toxic by inhalation Irritating to respiratory system Risk of serious damage to eyes May cause sensitization by skin contact Harmful: danger of serious damage to health by prolonged exposure if swallowed Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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