

PERKACIT ZDBC pdr and pdr-d

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

Product label name	Zinc dibutyldithiocarbamate
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 dibutyldithiocarbamate

Composition / information on ingredients

Number	% w/w	CAS-Number	Chemical name		
1	97.5	136-23-2	Zinc dibutyldithiocarbamate		
Number	EC-number	Annex-1 number	Symbols (EU Classification)		Risk-phrases
1	205-232-8	006-081-00-9	N, Xi		R36/37/38 R43 R50/53
Other Information			Formula: C ₁₈ H ₃₆ N ₂ S ₄ Zn.		

3. HAZARDS IDENTIFICATION

Irritating to eyes, respiratory system and skin.
May cause sensitization by skin contact.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Symptoms and effects	Dust may be irritating to the respiratory tract and cause symptoms of bronchitis. May cause alcohol intolerance. Irritating to eyes.
First aid	
General	Do not drink alcohol after exposure.
Inhalation	Move to fresh air. If symptoms persist, seek medical advice.
Skin	Wash immediately with soap and water.
Eye	Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.
Ingestion	Rinse mouth, give water to drink.
Advice to physician	No specific recommendations.

5. FIRE-FIGHTING MEASURES

Extinguishing media	Waterspray, water 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).

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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	Avoid contact with eyes. Avoid breathing dust. Avoid contact with skin.
Fire and explosion prevention	Avoid dust accumulation. Dust/air mixtures may ignite violently upon exposure to sparks or sources of ignition. Kst: 197 bar.m/s. Maximum corrected explosion pressure: 7.3 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	
Name	
Zinc dimbutyldithiocarbamate	WEL (TWA): 4 mg/m ³ (respirable dust) OES-TWA: 10.0 mg/m ³ (inhalable dust) OES-TWA: 4.0 mg/m ³ (respirable dust)
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, granules
Colour	white, light pink
Odour	odorless
Boiling point / range	not determined
Melting point / range	min. 100 °C
Flash point	not determined
Flammability	not determined
Autoignition temperature	400 °C
Explosive properties	dust explosion hazard
Explosion limits	Lower Explosion Limit (LEL): 20 g/m ³ . Minimum ignition energy: =< 10 mJ.
Oxidising properties	not applicable
Vapour pressure	negligible at room temperatures
Density	1270 kg/m ³ (20 °C)
Bulk density	310-350 kg/m ³
Solubility in water	practically insoluble

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Solubility in other solvents	CS ₂ , acetone
pH value	neutral character
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 dibutyldithiocarbamate
Acute toxicity	
Oral LD50	rat: > 5000 mg/kg.
Dermal LD50	rabbit: > 2000 mg/kg.
Irritation	
Skin	practically non-irritating EU: Irritating to skin.
Eye	practically non irritating EU: Irritating to eyes.
Respiratory	EU: Irritating to respiratory system.
Sensitization	May cause sensitization in susceptible individuals (Lit.)
Genotoxicity	not mutagenic (Ames test)
Other toxicological information	subchronic (90 days) oral toxicity: No Observed Effects Level >= 41 mg/kg/day. Oral carcinogenicity test: 2-year feeding study, rat: not carcinogenic; 18-months feeding study, mouse: not carcinogenic

12. ECOLOGICAL INFORMATION

Name	Zinc dibutyldithiocarbamate
Ecotoxicity	
Fish	96h-LC50 (Oncorhynchus mykiss): 520 mg/l. 96h-LC50 (Lepomis macrochirus): 880 mg/l.
Daphnia	48h-EC50 (Daphnia magna): 0.74 mg/l.

13. DISPOSAL CONSIDERATIONS

Product	Avoid discharge into the environment. 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.

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14. TRANSPORT INFORMATION

Land transport

ADR class	9	ADR / RID packing group	III
RID class	9	Substance Identification No.	3077
Hazard Identification No.	90	UN number	3077
TREM-Card	http://www.unece.org/trans/danger/publi/adr/adr_ling/uistic_e.htm		
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s. (zinc dibutylcarbamate) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc dibutyldithiocarbamate)		

Sea transport (IMDG-code / IMO)

IMO / IMDG code		Class	9
Packing group	III	UN number	3077
EMS	F-A, S-F	Subsidiary Risk	
Marine pollutant	yes		
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s. (zinc dibutylcarbamate)		

Air transport (ICAO-TI / IATA-DGR)

ICAO-TI/IATA-DGR		UN number	3077
Class	9	Packing group	III
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s. (zinc dibutylcarbamate)		

15. REGULATORY INFORMATION

Chemical description Zinc dibutyldithiocarbamate

Labelling according to EC directives

EC-number

see section 3

Classification based on

Annex-1 to directive 67/548/EEC



Symbols (EU classification)

IRRITANT (Xi)

DANGEROUS FOR
THE ENVIRONMENT (N)

R(isk) phrases (EU classification)

R36/37/38 Irritating to eyes, respiratory system and skin
R43 May cause sensitization by skin contact
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S(afety) phrases (EU classification)

S 24 Avoid contact with skin
S 37 Wear suitable gloves
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

Other information To be displayed on the label: "EC label".

German Water Hazard Class (WGK)

2 (VwVwS Anhang 3, Nr. 6611)

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006

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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-pharse information**Chemical name**

Zinc dimbutyldithiocarbamate

Risk-phrases

R36/37/38 R43 R50/53

Irritating to eyes, respiratory system and skin May cause sensitization by skin contact Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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