

## PERKACIT ZDBC pdr and pdr-d

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

<b>Product label name</b>	Zinc dibutyldithiocarbamate
<b>Supplier / manufacturer</b>	Performance Additives Italy S.p.A. Zona Industriale "A" 86039 Termoli (CB) Italy Tel. +39 0875 58941
<b>Emergency Telephone</b>	+49 40 30 299 - 0 (only during office hours, Behn Meyer Europe GmbH, Ballindamm 1, D-20095 Hamburg)
<b>Intended use</b>	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
<b>Other Information</b>			Formula: C <sub>18</sub> H <sub>36</sub> N <sub>2</sub> S <sub>4</sub> 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

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

### 5. FIRE-FIGHTING MEASURES

<b>Extinguishing media</b>	Waterspray, water mist, foam, dry chemical powder.
<b>Unsuitable extinguishing media</b>	Water jet.
<b>Special exposure hazards</b>	None known.
<b>Hazardous decomposition / combustion products</b>	Emits toxic fumes under fire conditions: hydrogen cyanide (HCN), sulphur dioxide (SO <sub>2</sub> ), nitrous gases (NO <sub>x</sub> ).

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<b>Protective equipment</b>	Wear self contained breathing apparatus.
<b>Other Information</b>	Do not allow run-off from fire fighting to enter drains or water courses.

### 6. ACCIDENTAL RELEASE MEASURES

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

### 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with eyes. Avoid breathing dust. Avoid contact with skin.
<b>Fire and explosion prevention</b>	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.
<b>Storage requirements</b>	Store in a dry and cool place.
<b>Other information</b>	Contributes to a major hazard site.

### 8. EXPOSURE CONTROL / PERSONAL PROTECTION

<b>Engineering controls</b>	Avoid dust generation. Ensure good ventilation and local exhaustion of the working area.
<b>Exposure limits</b>	
<b>Name</b>	
<b>Zinc dimbutylidithiocarbamate</b>	WEL (TWA): 4 mg/m <sup>3</sup> (respirable dust) OES-TWA: 10.0 mg/m <sup>3</sup> (inhalable dust) OES-TWA: 4.0 mg/m <sup>3</sup> (respirable dust)
<b>Personal protection</b>	
<b>Respiratory</b>	Avoid breathing dust. In case of insufficient ventilation wear suitable respiratory equipment, respirator with Filter P3.
<b>Hand</b>	Wear protective gloves.
<b>Eye</b>	Wear safety goggles.
<b>Skin</b>	Wear suitable protective clothing.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	powder, granules
<b>Colour</b>	white, light pink
<b>Odour</b>	odorless
<b>Boiling point / range</b>	not determined
<b>Melting point / range</b>	min. 100 °C
<b>Flash point</b>	not determined
<b>Flammability</b>	not determined
<b>Autoignition temperature</b>	400 °C
<b>Explosive properties</b>	dust explosion hazard
<b>Explosion limits</b>	Lower Explosion Limit (LEL): 20 g/m <sup>3</sup> . Minimum ignition energy: =< 10 mJ.
<b>Oxidising properties</b>	not applicable
<b>Vapour pressure</b>	negligible at room temperatures
<b>Density</b>	1270 kg/m <sup>3</sup> (20 °C)
<b>Bulk density</b>	310-350 kg/m <sup>3</sup>
<b>Solubility in water</b>	practically insoluble

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<b>Solubility in other solvents</b>	CS <sub>2</sub> , acetone
<b>pH value</b>	neutral character
<b>Partition coefficient n-octanol / water</b>	not determined
<b>Relative vapour density (air=1)</b>	not applicable
<b>Viscosity</b>	not applicable

### 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage and handling conditions (see section 7).
<b>Conditions to avoid</b>	No specific recommendations.
<b>Materials to avoid</b>	Oxidizing agents. Strong acid.
<b>Hazardous decomposition products</b>	No hazardous decomposition products known.
<b>Other information</b>	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

<b>Name</b>	Zinc dibutyldithiocarbamate
<b>Acute toxicity</b>	
<b>Oral LD50</b>	rat: > 5000 mg/kg.
<b>Dermal LD50</b>	rabbit: > 2000 mg/kg.
<b>Irritation</b>	
<b>Skin</b>	practically non-irritating EU: Irritating to skin.
<b>Eye</b>	practically non irritating EU: Irritating to eyes.
<b>Respiratory</b>	EU: Irritating to respiratory system.
<b>Sensitization</b>	May cause sensitization in susceptible individuals (Lit.)
<b>Genotoxicity</b>	not mutagenic (Ames test)
<b>Other toxicological information</b>	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

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

### 13. DISPOSAL CONSIDERATIONS

<b>Product</b>	Avoid discharge into the environment. Small quantities: According to local regulations. Large quantities: Consult Performance Additives for special advice.
<b>Contaminated packaging</b>	According to local regulations.
<b>Other information</b>	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	<a href="http://www.unece.org/trans/danger/publi/adr/adr_linguistic_e.htm">http://www.unece.org/trans/danger/publi/adr/adr_linguistic_e.htm</a>		
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**

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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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