

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006

PERKACIT NDBC

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

Product label name	Nickel dibutyldithiocarbamate
Supplier	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	Vulcanisation 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 Nickel dibutyldithiocarbamate

Composition / information on ingredients

Number	% w/w	CAS-number	Chemical name		
1	> 98.5	13927-77-0	Nickel dibutyldithiocarbamate		
2	< 1.5	8042-47-5	White mineral oil (petroleum)		
Number	EC-number	Annex-1 number	Symbol(s) (EU classification)	Risk-phrase(s)	
1	237-696-2		none	none	
2	232-455-8		none	none	

Other information Formula: C₁₈H₃₆N₂S₄Ni.

3. HAZARDS IDENTIFICATION

Not classified as hazardous according to the EEC Dangerous Substance Directive and Dangerous Preparation Directive.

4. FIRST AID MEASURES

Symptoms and effects	Dust may be irritating to the respiratory tract and cause symptoms of bronchitis. May cause alcohol intolerance.
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	In case of fire, use waterspray/mist, foam, dry chemical powder.
Unsuitable extinguishing media	waterjet.
Special exposure hazards	Nickel oxides = EEC category 1 carcinogen: substance known to be carcinogenic to man.
Hazardous decomposition / combustion products	Emits toxic fumes under fire conditions: hydrogen cyanide (HCN), sulphur dioxide (SO ₂), nitrous gases (NO _x), Nickel oxides.
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.

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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.
Storage requirements	Store in a dry and cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls	Avoid dust generation. Ensure good ventilation and local exhaustion of the working area.
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Exposure limits

Name	
Nickel dibutyldithiocarbamate	TWA: 1 mg/m ³ STEL: 3 mg/m ³ 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.
Hand	Wear protective gloves.
Eye	safety goggles recommended.
Skin and body	Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	fine powder; powder, oil coated
Colour	dark green
Odour	characteristic
Boiling point/range	not determined
Melting point/range	min. 85 °C (final).
Flash point	260 °C
Flammability	not determined
Autoignition temperature	not determined
Explosive properties	dust explosion hazard
Explosion limits	Lower Explosion Limit (LEL): not determined Minimum ignition energy: 245 < MIE < 275 mJ (Dedusted powder) Minimum ignition energy: =< 3 mJ (powder)
Oxidising properties	not applicable
Vapour pressure	Negligible at room temperatures
Density	1300 kg/m ³ (20 °C)
Bulk density	300-340 kg/m ³ (20 °C)
Solubility in water	Practically insoluble
Solubility in other solvents	benzene, acetone, chlorinated hydrocarbons
pH value	not determined
Partition coefficient n-octanol/water	5.44 (calculated)
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	oxidising agents, strong acid.
Hazardous decomposition products	Carbon disulfide
Other information	During the vulcanization process, traces of carcinogenic N-nitrosamines may be formed from decomposition products (amines) in the presence of nitrosating agents

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11. TOXICOLOGICAL INFORMATION

Name	Nickel dibutyldithiocarbamate
Acute toxicity	
Oral LD50	rat: >5000 mg/kg.
Dermal LD50	rabbit: >2000 mg/kg.
Inhalation LC50	rat: No mortality observed at max. attainable concentration 0.416 mg/l.
Irritation	
Skin	Non-irritating
Eye	Minimally irritating.
Sensitization	Not sensitizing (guinea pig).
Genotoxicity	Ames test: Not mutagenic.

12. ECOLOGICAL INFORMATION

Name	Nickel dibutyldithiocarbamate
Ecotoxicity fish	No Observed Effect Concentration (NOEC) (Poecilia reticulata): >30 mg/l (Saturated solution). No Observed Effect Concentration (NOEC) (Danio rerio): >10 mg/l.
Fate	
Bioaccumulation	307 (calculated)

13. DISPOSAL CONSIDERATIONS

Product	Avoid discharge into the environment. Small quantities: According to local regulations. Large quantities: Consult Flexsys for special advice.
Contaminated packaging	According to local regulations.
Other information	Waste code number: Please refer to your specific industry in the European Waste Catalogue.

14. TRANSPORT INFORMATION

<i>Land transport</i>			
ADR class	not restricted	ADR/RID packing group	not relevant
RID class	not restricted	Substance Identification No.	not relevant
Hazard Identification No.	not relevant	UN number	none
TREM-Card	not relevant		
Proper Shipping Name	not relevant		
<i>Sea transport (IMDG-code / IMO)</i>			
IMO/IMDG code	not restricted	Class	not restricted
Packing group	not relevant	UN number	none
EMS	not relevant	Subsidiary Risk	no
Proper Shipping Name	not relevant		
<i>Air transport (ICAO-TI / IATA-DGR)</i>			
ICAO-TI/IATA-DGR		UN number	none
Class	not restricted	Packing group	not relevant
Proper Shipping Name	not relevant		

15. REGULATORY INFORMATION

Chemical description Nickel dibutyldithiocarbamate

Labelling according to EC directives

EC-number See section 3

Classification based on Tests

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Symbol(s) (EU classification)	none
R(isk) phrase(s) (EU classification)	none
S(afety) phrase(s) (EU classification)	none
German Water Hazard Class (WGK)	1 (VwVwS Anhang 3)

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-phrase information

Chemical name	Risk-phrase(s)	
Nickel dibutyldithiocarbamate	none	none
White mineral oil (petroleum)	none	none

History

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