

Material Safety Data Sheet acc. to ISO/DIS 11014

Printing date 01/20/2003

Reviewed on 01/20/2003

1 Identification of substance

- **Product details**
- **Trade name:** **DINITROL 506**
- **Application of the substance / the preparation** Polyurethane-sealant
- **Manufacturer/Supplier:**
EFTEC AG Hofstrasse 31 CH-8590 Romanshorn, Switzerland
DINOL AB Spangatan 3 Box 149 S-28122 Hässleholm
- **Information department:** +41(0)71 466 43 00 Customer Support Laboratory
- **Emergency information:** +41(0)1 251 51 51 Swiss Toxicological Information Centre

2 Composition/Data on components

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

1333-86-4	Carbon black	10-25%
28553-12-0	di-"isononyl" phthalate	10-25%
101-68-8	diphenylmethane-4,4'-di-isocyanate	2.5-10%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- **Hazard description:**
Harmful
- **Canadian Hazard Symbols**



- **Information pertaining to particular dangers for man and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
Irritating to eyes, respiratory system and skin.
May cause sensitization by inhalation and skin contact.
Contains isocyanates. See information supplied by the manufacturer.
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0 - 4)**



Health = 1
Fire = 1
Reactivity = 0

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· **HMIS-ratings (scale 0 - 4)**

HEALTH	*1	Health = *1
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

4 First aid measures

- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire fighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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· **Components with limit values that require monitoring at the workplace:**

1333-86-4 Carbon black

PEL	3.5 mg/m ³
REL	3.5* mg/m ³ *0.1 in presence of PAHs, as PAHs; 10-hr TWA
TLV	3.5 mg/m ³

101-68-8 diphenylmethane-4,4'-di-isocyanate

PEL	Short-term value: C 0.2 mg/m ³ , C 0.02 ppm
REL	Short-term value: C 0.2* mg/m ³ , C 0.02* ppm Long-term value: 0.05 mg/m ³ , 0.005 ppm *10-min
TLV	0.051 mg/m ³ , 0.005 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **General Information**

Form: Highly viscous
Color: Black

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Odor:	Characteristic
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	208°C (406°F)
· Flash point:	164°C (327°F)
· Ignition temperature:	370.0°C (698°F)
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	0.1 Vol %
Upper:	0.2 Vol %
· Vapor pressure at 20°C (68°F):	0.0 hPa (0 mm Hg)
· Density:	Not determined.
· Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
· Solvent content:	
Organic solvents:	0.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

101-68-8 diphenylmethane-4,4'-di-isocyanate

Oral	LD50	4700 mg/kg (rat)
Inhalative	LC50/4h	370 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

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12 Ecological information

- **Ecotoxicological effects:**

- **Acquatic toxicity:**

101-68-8 diphenylmethane-4,4'-di-isocyanate	
LC50	> 100 mg/l (fish)

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- **Product:**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **DOT regulations:**

- **Hazard class:** -

- **Land transport ADR/RID (cross-border):**

- **ADR/RID class:** -

- **Maritime transport IMDG:**

- **IMDG Class:** -

- **Marine pollutant:** No

- **Air transport ICAO-TI and IATA-DGR:**

- **ICAO/IATA Class:** -

15 Regulations

- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

- **Section 313 (Specific toxic chemical listings):**

101-68-8	diphenylmethane-4,4'-di-isocyanate
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- **TSCA (Toxic Substances Control Act):**

9082-00-2	Polyetherpolyol
1333-86-4	Carbon black
28553-12-0	di-"isononyl" phthalate
25322-69-4	Polyetherpolyol
92704-41-1	China Clay
101-68-8	diphenylmethane-4,4'-di-isocyanate

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· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

101-68-8	diphenylmethane-4,4'-di-isocyanate	CBD;D
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· **IARC (International Agency for Research on Cancer)**

1333-86-4	Carbon black	2B
101-68-8	diphenylmethane-4,4'-di-isocyanate	3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

1333-86-4	Carbon black	A4
77-58-7	dibutyltin dilaurate	A4

· **MAK (German Maximum Workplace Concentration)**

1333-86-4	Carbon black	3
101-68-8	diphenylmethane-4,4'-di-isocyanate	3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

1333-86-4	Carbon black
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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Harmful

· **Hazard-determining components of labelling:**

diphenylmethane-4,4'-di-isocyanate

· **Risk phrases:**

Irritating to eyes, respiratory system and skin.
May cause sensitization by inhalation and skin contact.

· **Safety phrases:**

Do not breathe gas/fumes/vapour/spray.
Avoid contact with skin.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable gloves.
In case of accident or if you feel unwell, seek medical advice immediately.
This material and its container must be disposed of as hazardous waste.

· **Special labeling of certain preparations:**

Contains isocyanates. See information supplied by the manufacturer.

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· National regulations:

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

· Technical instructions (air):

Class	Share in %
I	2,5-10
III	10-25

· Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing MSDS:** Customer Support Laboratory
- Contact:** H. Perler
- * Data compared to the previous version altered.**

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