

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 08/23/2004

Reviewed on 08/23/2004

\*

**1 Identification of substance**

· **Product details**

· **Trade name:** D-500MVFW

· **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

**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% |
| 101-68-8  | diphenylmethane-4,4'-di-isocyanate | ☒ Xn; R 20-36/37/38-42/43 | 5-10%  |
| 5873-54-1 | diphenylmethane-2,4'-diisocyanate  | ☒ Xn; R 20-36/37/38-42/43 | 0.1-1% |

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

**3 Hazards identification**

· **Hazard description:**

Xn 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)

|              |                |
|--------------|----------------|
| 1            | Health = *1    |
| 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.  
Supply fresh air; consult doctor in case of complaints.  
Seek medical treatment in case of complaints.
- **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:** Immediately call a doctor.

## 5 Fire fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray.  
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:**  
Pick up mechanically.  
Ensure adequate ventilation.

## 7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **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.
- **Maximum storage temperature:** < 35°C
- **Minimum storage temperature:** > 0°C

## 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 <sup>3</sup>  |
| REL | 3.5* mg/m <sup>3</sup><br>*0.1 in presence of PAHs, as PAHs; 10-hr TWA |
| TLV | 3.5 mg/m <sup>3</sup>  |

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

|     |  |
|-----|--|
| PEL | Short-term value: C 0.2 mg/m <sup>3</sup> , C 0.02 ppm   |
| REL | Short-term value: C 0.2* mg/m <sup>3</sup> , C 0.02* ppm<br>Long-term value: 0.05 mg/m <sup>3</sup> , 0.005 ppm<br>*10-min |
| TLV | 0.051 mg/m <sup>3</sup> , 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:** Not required.

· **Protection of hands:**



Protective gloves

· **Material of gloves:** Rubber gloves

· **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**

|               |                |
|---------------|----------------|
| <b>Form:</b>  | Fluid          |
| <b>Color:</b> | Black          |
| <b>Odor:</b>  | Characteristic |

· **Change in condition**

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** 208°C (406°F)

· **Flash point:** > 100°C (> 212°F)

· **Ignition temperature:** 370°C (698°F)

· **Auto igniting:** Product is not selfigniting.

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|                               |   |
|-------------------------------|---|
| <b>· Danger of explosion:</b> | Product does not present an explosion hazard. |
|-------------------------------|---|

|                            |  |
|----------------------------|--|
| <b>· Explosion limits:</b> |  |
|----------------------------|--|

|               |           |
|---------------|-----------|
| <b>Lower:</b> | 0.1 Vol % |
|---------------|-----------|

|               |           |
|---------------|-----------|
| <b>Upper:</b> | 0.2 Vol % |
|---------------|-----------|

|   |                 |
|---|-----------------|
| <b>· Vapor pressure at 20°C (68°F):</b> | 0 hPa (0 mm Hg) |
|---|-----------------|

|                                  |                         |
|----------------------------------|-------------------------|
| <b>· Density at 20°C (68°F):</b> | 1.276 g/cm <sup>3</sup> |
|----------------------------------|-------------------------|

|   |  |
|---|--|
| <b>· Solubility in / Miscibility with</b> |  |
|---|--|

|               |                                   |
|---------------|-----------------------------------|
| <b>Water:</b> | Not miscible or difficult to mix. |
|---------------|-----------------------------------|

|                           |  |
|---------------------------|--|
| <b>· Solvent content:</b> |  |
|---------------------------|--|

|                          |       |
|--------------------------|-------|
| <b>Organic solvents:</b> | 0.0 % |
|--------------------------|-------|

|                          |        |
|--------------------------|--------|
| <b>· Solids content:</b> | 99.0 % |
|--------------------------|--------|

### 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:**

|   |  |
|---|--|
| <b>· LD/LC50 values that are relevant for classification:</b> |  |
|---|--|

|  |  |  |
|--|--|--|
| <b>101-68-8 diphenylmethane-4,4'-di-isocyanate</b> |  |  |
|--|--|--|

|      |      |                  |
|------|------|------------------|
| Oral | LD50 | 4700 mg/kg (rat) |
|------|------|------------------|

|            |         |                |
|------------|---------|----------------|
| Inhalative | LC50/4h | 370 mg/l (rat) |
|------------|---------|----------------|

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritating effect.

- **Sensitization:** Sensitization possible through inhalation.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

### 12 Ecological information

- **Ecotoxicological effects:**

|                            |  |
|----------------------------|--|
| <b>· Aquatic toxicity:</b> |  |
|----------------------------|--|

|  |  |  |
|--|--|--|
| <b>101-68-8 diphenylmethane-4,4'-di-isocyanate</b> |  |  |
|--|--|--|

|      |                   |
|------|-------------------|
| LC50 | > 100 mg/l (fish) |
|------|-------------------|

- **General notes:**

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

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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

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **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

- **IARC (International Agency for Research on Cancer)**

1333-86-4 Carbon black 2B

101-68-8 diphenylmethane-4,4'-di-isocyanate 3

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|   |                                    |    |
|---|------------------------------------|----|
| <b>· NTP (National Toxicology Program)</b>                                |                                    |    |
| None of the ingredients is listed.  |                                    |    |
| <b>· TLV (Threshold Limit Value established by ACGIH)</b>                 |                                    |    |
| 1333-86-4   | Carbon black                       | A4 |
| <b>· MAK (German Maximum Workplace Concentration)</b>                     |                                    |    |
| 1333-86-4   | Carbon black                       | 3  |
| 101-68-8  | diphenylmethane-4,4'-di-isocyanate | 3  |
| <b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b> |                                    |    |
| 1333-86-4   | Carbon black                       |    |
| <b>· OSHA-Ca (Occupational Safety &amp; Health Administration)</b>        |                                    |    |
| 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:**



Xn Harmful

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

diphenylmethane-4,4'-di-isocyanate

diphenylmethane-2,4'-diisocyanate

**· Risk phrases:**

Irritating to eyes, respiratory system and skin.

May cause sensitization by inhalation and skin contact.

**· Safety phrases:**

Do not breathe aerosol

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.

|  |                   |
|--|-------------------|
| <b>· National regulations:</b>   |                   |
| The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances. |                   |
| <b>· Technical instructions (air):</b>   |                   |
| <b>Class</b>   | <b>Share in %</b> |
| I  | 5-10              |
| <b>· Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.</b>                     |                   |

### 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.

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

USA