



## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 12.10.2009

Revision: 12.10.2009

### 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** 4.21 ZWALUW POLYURETHANE-50 FC
- **Article number:** PU450/1
- **Application of the substance / the preparation**  
Sealant  
Adhesives
- **Manufacturer/Supplier:**  
DEN BRAVEN SEALANTS BV  
Denariusstraat 11  
4903 RC Oosterhout  
Netherlands  
Tel: +31 (0)162-491000  
Fax: +31 (0)162-421217  
E-mail: info@denbraven.nl  
Internet: www.denbraven.nl
- **Further information obtainable from:**  
Product safety department.  
info@denbraven.nl
- **Information in case of emergency:**  
info@denbraven.nl  
Tel.: +31 (0)162-491000

### 2 Hazards identification

- **Hazard description:**



Xn Harmful

- **Information concerning particular hazards for human 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.

R 42 May cause sensitisation by inhalation.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Contains isocyanates. See information supplied by the manufacturer

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

### 3 Composition/information on ingredients

- **Chemical characterization**

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

- **Dangerous components:**

CAS: 64742-95-6 EINECS: 265-199-0	Solvent naphtha (petroleum), light arom. Carc. Cat. 2;  Xn,  Xi,  N; R 10-37-51/53-65	5-10%
CAS: 1305-78-8 EINECS: 215-138-9	calcium oxide Xi; R 37/38-41	1-5%
CAS: 101-68-8 EINECS: 202-966-0	4,4'-methylenediphenyl diisocyanate Carc. Cat. 3;  Xn,  Xi; R 20-36/37/38-40-42/43-48/20	≤1.0%

(Contd. on page 2)



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**Trade name: 4.21 ZWALUW POLYURETHANE-50 FC**

(Contd. of page 1)

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

### 4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

### 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:**  
Inform respective authorities in case of seepage into water course or sewage system.  
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.
- **Additional information:** See Section 8 for information on personal protection equipment.

### 7 Handling and storage

- **Handling:**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** 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:** None.

### 8 Exposure controls/personal protection

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

- **Ingredients with limit values that require monitoring at the workplace:**

**1305-78-8 calcium oxide (1-5%)**

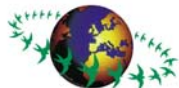
WEL	Long-term value: 2 mg/m <sup>3</sup>
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**101-68-8 4,4'-methylenediphenyl diisocyanate (≤1.0%)**

WEL	Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO
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- **Additional information:** The lists valid during the making were used as basis.

(Contd. on page 3)



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(Contd. of page 2)

- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.
- **Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**  
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling

### 9 Physical and chemical properties

#### · General Information

<b>Form:</b>	Pasty
<b>Colour:</b>	Various colours
<b>Odour:</b>	Characteristic

#### · Change in condition

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.

· **Flash point:** > 55°C

· **Ignition temperature:** 450°C

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

#### · Explosion limits:

<b>Lower:</b>	Undetermined.
<b>Upper:</b>	Undetermined.

· **Vapour pressure:** Undetermined.

· **Density at 20°C:** 1.17 g/cm<sup>3</sup>

· **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

· **pH-value:** Undetermined.

#### · Solvent content:

<b>VOC (EC)</b>	9.00 %
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(Contd. on page 4)



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Revision: 12.10.2009

Trade name: 4.21 ZWALUW POLYURETHANE-50 FC

(Contd. of page 3)

VOC (EC) 105.3 g/l

### 10 Stability and reactivity

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

### 11 Toxicological information

- **Acute toxicity:**

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

#### 64742-95-6 Solvent naphtha (petroleum), light arom.

Oral	LD50	>6800 mg/kg (rat)
Dermal	LD50	>3400 mg/kg (rab)
Inhalative	LC50/4 h	>10.2 mg/l (rat)

#### 101-68-8 4,4'-methylenediphenyl diisocyanate

Oral	LD50	2200 mg/kg (mouse)
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- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through inhalation.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Harmful
- **Sensitisation** May cause sensitisation by inhalation.

### 12 Ecological information

- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Harmful to aquatic organisms

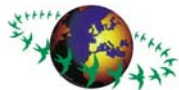
### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

08 04 09 waste adhesives and sealants containing organic solvents or other dangerous substances

(Contd. on page 5)



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(Contd. of page 4)

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

### 14 Transport information

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

- **Maritime transport IMDG:**
- **IMDG Class:** -

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

### 15 Regulatory information

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**



Xn Harmful

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

4,4'-methylenediphenyl diisocyanate

- **Risk phrases:**

42 May cause sensitisation by inhalation.  
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Safety phrases:**

2 Keep out of the reach of children.  
23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).  
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
46 If swallowed, seek medical advice immediately and show this container or label.  
63 In case of accident by inhalation: remove casualty to fresh air and keep at rest.

- **Special labelling of certain preparations:**

Contains isocyanates. See information supplied by the manufacturer

### 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.

- **Relevant R-phrases**

10 Flammable.  
20 Harmful by inhalation.  
36/37/38 Irritating to eyes, respiratory system and skin.  
37 Irritating to respiratory system.  
37/38 Irritating to respiratory system and skin.  
40 Limited evidence of a carcinogenic effect.  
41 Risk of serious damage to eyes.

(Contd. on page 6)



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(Contd. of page 5)

- 42/43 May cause sensitisation by inhalation and skin contact.
- 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 65 Harmful: may cause lung damage if swallowed.

- **Department issuing MSDS:** Product safety department.
- **Contact:** Mr. C.J.A. Timmermans
- **\* Data compared to the previous version altered.**

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