

Material Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 06.08.2009

Revision: 06.08.2009

1 Identification of substance

· **Product details**

- **Trade name:** WAKOL PU 270 Polyurethane Adhesive / A
- **Application of the substance / the preparation** Adhesives

· **Manufacturer/Supplier:**

WAKOL GmbH
Bottenbacher Str. 30
66954 Pirmasens
thomas.wieland@wakol.de

+49 (0)6331 8001 144

· **Informing department:** Industrial Safety Department

· **Emergency information:**

During business hours: Industrial Safety Department; +49 (0) 6331 8001 144

2 Hazards identification

· **Hazard designation:** Not applicable.

· **Information pertaining to particular dangers for man and environment** Not applicable.

· **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:** Adhesive

· **Dangerous components:** Void

4 First aid measures

· **General information** No special measures required.

· **After skin contact** Generally the product does not irritate the skin.

· **After eye contact**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing** Rinse out mouth and then drink plenty of water.

5 Fire fighting measures

· **Suitable extinguishing agents** Use fire extinguishing methods suitable to surrounding conditions.

· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Person-related safety precautions:** Not required.

· **Measures for environmental protection:** No special measures required.

· **Measures for cleaning/collecting:**

Pick up mechanically.

Dispose contaminated material as waste according to item 13.

· **Additional information:** No dangerous substances are released.

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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 containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with critical values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
The usual precautionary measures are to be adhered to when handling chemicals.
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:** Not required.
- **Eye protection:** Not required.

9 Physical and chemical properties:

- **General Information**
- Form:** Pasty
- Colour:** Light beige
- Smell:** Weak, characteristic
- **Change in condition**
- Melting point/Melting range:** Undetermined.
- Boiling point/Boiling range:** Undetermined.
- **Flash point:** Not applicable.
- **Self-inflammability:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Steam pressure at 20°C:** 1 hPa
- **Density at 20°C** 1.735 g/cm³ (EN ISO 2811-1)
- **Solubility in / Miscibility with Water:** Insoluble.
- **Viscosity:**
- dynamic at 20°C:** 172000 mPas (ISO 2555 n)

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· **Solvent content:**
VOC 0.00 %

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 composition:** No dangerous decomposition products known.

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information:

- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

13 Disposal considerations

- **Product:**
- **Recommendation** Must be specially treated adhering to official regulations.
- **European waste catalogue**
08 00 00 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 04 00 wastes from MFSU of adhesives and sealants (including waterproofing products)
08 04 10 waste adhesives and sealants other than those mentioned in 08 04 09
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**
- **ADR/RID-GGVS/E Class:** -

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- **Maritime transport IMDG/GGVSea:**
- **IMDG/GGVSea Class:** -
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulatory information

- **Designation according to EC guidelines:**
The product is not subject to classification according to the calculation methods of the "General Classification Guideline for Preparations of the EU" as issued in the latest valid version.
Observe the general safety regulations when handling chemicals.
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Other regulations, limitations and prohibitive regulations**
- **GEV-Guideline/EMICODE:** EC 1 R, "very low emission"
- **VOC:**
- **VOC (EU)** 0,0 g/l

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 data specification sheet:** Industrial Safety Department.
- **Contact:** Dr. Thomas Wieland

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1 Identification of substance

- **Product details**
- **Trade name:** **WAKOL PU 270 Polyurethane Adhesive / B**
- **Application of the substance / the preparation** *Hardening agent/ Curing agent*
- **Manufacturer/Supplier:**
 WAKOL GmbH
 Bottenbacher Str. 30
 66954 Pirmasens
 thomas.wieland@wakol.de +49 (0)6331 8001 144
- **Informing department:** *Industrial Safety Department*
- **Emergency information:**
During business hours: Industrial Safety Department; +49 (0) 6331 8001 144

2 Hazards identification

- **Hazard designation:**



Xn Harmful

- **Information pertaining to particular dangers for man and environment**

R 20 Harmful by inhalation.
 R 36/37/38 Irritating to eyes, respiratory system and skin.
 R 42/43 May cause sensitisation by inhalation and skin contact.
 Contains isocyanates. See information supplied by the manufacturer

3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** *Adhesive*
- **Dangerous components:**

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues	50-100%
<div style="display: flex; justify-content: center; gap: 10px;"> ☒ Xn, ☒ Xi; R 20-36/37/38-42/43 </div>	
- **Additional information** *For the wording of the listed risk phrases refer to section 16.*

4 First aid measures

- **General information**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **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. Then consult a doctor.*
- **After swallowing** *If symptoms persist consult doctor.*

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5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with full jet
- **Special hazards caused by the material, its products of combustion or flue gases:**
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:**
Ensure adequate ventilation
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **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:**
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 containers:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
Protect from frost.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with critical values that require monitoring at the workplace:**
9016-87-9 diphenylmethanediisocyanate, isomers and homologues
WEL Short-term value: 0.07 mg/m³
Long-term value: 0.02 mg/m³
Sen; as -NCO
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.

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Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

Not necessary if room is well-ventilated.

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:** Protective gloves

· **Material of gloves** Butyl rubber, BR

· **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:** Safety glasses

9 Physical and chemical properties:

· **General Information**

Form: Fluid
Colour: Brown
Smell: Characteristic

· **Change in condition**

Melting point/Melting range: < 0°C

Boiling point/Boiling range: 201°C

· **Flash point:** 220°C

· **Ignition temperature:** >600°C

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

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

· **Steam pressure at 20°C:** <0.00001 hPa

· **Density at 20°C** 1.24 g/cm³ (EN ISO 2811-1)

· **Solubility in / Miscibility with**

Water: Insoluble.

· **Viscosity:**

dynamic at 20°C: 90 mPas (ISO 2555 s beachten!)

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

· **Dangerous reactions** Reacts with alcohols, amines, aqueous acids and alkalis.

· **Dangerous products of composition:**

Danger of forming toxic pyrolysis products.

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Trade name: WAKOL PU 270 Polyurethane Adhesive / B

Carbon dioxide

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11 Toxicological information· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:****9016-87-9 diphenylmethanediisocyanate, isomers and homologues**

Oral LD50 >15000 mg/kg (rat)

Dermal LD50 >5000 mg/kg (rabbit)

Inhalative LC50/4 h 490 mg/l (rat)

· **Primary irritant effect:**· **on the skin:** Irritant to skin and mucous membranes.· **on the eye:** Irritating effect.· **Sensitization:**

Sensitizing effect through inhalation is possible by prolonged exposure.

Sensitizing effect by skin contact is possible by prolonged exposure.

· **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

Irritant

· **Sensitisation** May cause sensitisation by inhalation and skin contact.**12 Ecological information:**· **Ecotoxicological effects:**· **Aquatic toxicity:****9016-87-9 diphenylmethanediisocyanate, isomers and homologues**

EC50/24h >100 mg/l (bacteriums)

EC50/48h >1.000 mg/l (*Daphnia magna*)LC0/96h >1000 mg/l (*Brachydanio rerio*)LC50/96h >1.000 mg/l (*Danio rerio*)· **General notes:**

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

Do not allow product to reach ground water, water course or sewage system.

13 Disposal considerations· **Product:**· **Recommendation** Must be specially treated adhering to official regulations.· **European waste catalogue**

08 00 00 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS

08 05 00 wastes not otherwise specified in 08

08 05 01 waste isocyanates

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

14 Transport information

- **Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**
- **ADR/RID-GGVS/E Class:** -
- **Maritime transport IMDG/GGVSea:**
- **IMDG/GGVSea Class:** -
- **Marine pollutant:** -
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulatory information

- **Designation according to EC guidelines:**
The product has been marked in accordance with EU Directives / respective national laws.

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



Xn Harmful

- **Hazard-determining components of labelling:**
diphenylmethanediisocyanate, isomeres and homologues
- **Risk phrases:**
20 Harmful by inhalation.
36/37/38 Irritating to eyes, respiratory system and skin.
42/43 May cause sensitisation by inhalation and skin contact.
- **Safety phrases:**
23 Do not breathe fumes/aerosol.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37 Wear suitable protective clothing and gloves.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- **Special designation of certain preparations:**
Contains isocyanates. See information supplied by the manufacturer
- **National regulations**
The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

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- **Other regulations, limitations and prohibitive regulations**
- **GEV-Guidline/EMICODE:**
EC 1 R, "very low emission"
(as ready-for-use mixture with component A)
- **VOC:**
- **VOC (EU) 0,0 g/l**

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**
20 Harmful by inhalation.
36/37/38 Irritating to eyes, respiratory system and skin.
42/43 May cause sensitisation by inhalation and skin contact.
- **Department issuing data specification sheet: Industrial Safety Department.**
- **Contact: Dr. Thomas Wieland**

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