

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 11.05.2009

Revision: 11.05.2009

1 Identification of substance

- **Product details**

- **Trade name:** WAKOL PS 205 Casting Resin / A
- **Application of the substance / the preparation** Reaction resin

- **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**

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 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

- **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:**

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

50-100%

Xn, Xi; R 20-36/37/38-42/43

- **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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact** Immediately wash with water and soap and rinse thoroughly.

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- **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.
- **Information for doctor**
- **Treatment** In cases of irritation to the lungs, initial treatment with Dexametason metered aerosol.

5 Fire fighting measures

- **Suitable extinguishing agents**
Use fire extinguishing methods suitable to surrounding conditions.
CO₂, powder or water spray. Fight larger fires with water spray.
- **Special hazards caused by the material, its products of combustion or flue gases:**
In case of fire, the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NO_x)
Hydrogen cyanide (HCN)
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.
- **Additional information**
Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:** Prevent seepage into sewage system, workpits and cellars.
- **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:** Keep receptacles tightly sealed.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and containers:** Store only in the original receptacle.
- **Information about storage in one common storage facility:**
Do not store together with alkalis (caustic solutions).
Do not store together with acids.

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· **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.
- **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.
 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 self-contained respiratory protective device.
- **Protection of hands:**
 Preventive skin protection by use of skin-protecting agents is recommended.
 For direct contact with liquid adhesive (for example cleaning works): protective gloves. Otherwise, no hand protection necessary.
- **Material of gloves**
 Butyl rubber, BR
 Nitrile rubber, NBR
 PVC 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:** Not required.

9 Physical and chemical properties:

- **General Information**

Form:	Fluid
Colour:	Brown
Smell:	Weak, characteristic
- **Change in condition**

Melting point/Melting range:	ca. 10°C
Boiling point/Boiling range:	> 260°C
- **Flash point:** > 200°C
- **Ignition temperature:** 600°C
- **Self-inflammability:** Product is not selfigniting.

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- **Danger of explosion:** *Product does not present an explosion hazard.*
- **Steam pressure at 20°C:** *0.00001 hPa*
- **Density at 20°C** *1.13 g/cm³ (EN ISO 2811-1)*
- **Solubility in / Miscibility with Water:** *Not miscible or difficult to mix.*
- **Viscosity:**
 dynamic at 20°C: *150 mPas (ISO 2555)*
- **Solvent content:**
 VOC *0.0 %*
 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:**
- **LD/LC50 values that are relevant for classification:**
9016-87-9 diphenylmethanediisocyanate, isomeres and homologues
- Oral LD50 >15.000 mg/kg (rat)
- Dermal LD50 >5.000 mg/kg (rabbit)
- Inhalative LC50/4h 490 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 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:

- **Information about elimination (persistence and degradability):**
- **Other information:** *The product is difficultly biodegradable.*

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· **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 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 together with household garbage. Do not allow product to reach sewage system.

Must be specially treated adhering to official regulations.

· **European waste catalogue**

07 00 00 WASTES FROM ORGANIC CHEMICAL PROCESSES

07 02 00 wastes from the MFSU of plastics, synthetic rubber and man-made fibres

07 02 08 other still bottoms and reaction residues

· **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:** No· **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 classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

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

Xn Harmful

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- **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.
24 Avoid contact with skin.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
29 Do not empty into drains.
37 Wear suitable 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**
- **Water hazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.*
- **Other regulations, limitations and prohibitive regulations**
- **GEV-Guidline/EMICODE:**
*EC 1, "very low emission"
(as ready-for-use mixture with component B)*
- **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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- **Application of the substance / the preparation** Reaction resin
- **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:**



Xi Irritant

- **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.
R 36/38 Irritating to eyes and skin.
- **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: 1344-09-8 | Silicic acid, sodium salt | 50-100% |
| EINECS: 215-687-4 | Xi; R 36/37/38 | |
- **Additional information** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **General information** Immediately remove any clothing soiled by the product.
- **After inhalation** 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** Water

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

6 Accidental release measures

· **Person-related safety precautions:**

Wear protective clothing.

Particular danger of slipping on leaked/spilled product.

Wear protective equipment. Keep unprotected persons away.

· **Measures for environmental protection:**

Prevent seepage into sewage system, workpits and cellars.

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).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

7 Handling and storage

· **Handling**

· **Information for safe handling:** Open and handle receptacle with care.

· **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:** Keep receptacle tightly sealed.

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**

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:**

Preventive skin protection by use of skin-protecting agents is recommended.

For direct contact with liquid adhesive (for example cleaning works): protective gloves. Otherwise, no hand protection necessary.

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

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- **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:** Not required.

9 Physical and chemical properties:

· General Information

Form:	Fluid
Colour:	Colourless
Smell:	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.
- **Density at 20°C** 1.48 g/cm³ (EN ISO 2811-1)
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
- **Viscosity:**
dynamic at 20°C: 270 mPas (ISO 2555)
- **Solvent content:**
VOC 0.0 %
0.00 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Dangerous reactions**
Reacts with light alloys to form hydrogen.
Strong exothermic reaction with acids.
- **Dangerous products of composition:** No dangerous decomposition products known.

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
on the skin: Irritant to skin and mucous membranes.
on the eye: Irritating effect.
- **Sensitization:** No sensitizing effects known.

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· 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:

Irritant

12 Ecological information:

· General notes:

Water hazard class 1 (German Regulation) (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.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

13 Disposal considerations

· Product:

· Recommendation

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

· European waste catalogue

12 00 00 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS

12 01 00 wastes from shaping and physical and mechanical surface treatment of metals and plastics

12 01 05 plastics shavings and turnings

· 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: No

· 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.

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

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

Xi Irritant

· **Risk phrases:**

36/38 Irritating to eyes and skin.

· **Safety phrases:**

23 Do not breathe fumes/aerosol.

24/25 Avoid contact with skin and eyes.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

27 Take off immediately all contaminated clothing.

37 Wear suitable gloves.

· **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.· **Other regulations, limitations and prohibitive regulations**· **GEV-Guideline/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**

36/37/38 Irritating to eyes, respiratory system and skin.

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