

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.12.2016

Version number 24

Revision: 28.12.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product identifier
- Trade name *Okamul PU Komp. A*
- 1.2 Relevant identified uses of the substance or mixture and uses advised against *none*
- Sector of Use *SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)*
- Application of the substance / the mixture *Adhesives*
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier: *Kiesel Bauchemie GmbH & Co. KG*
Wolf-Hirth-Str. 2

D-73730 Esslingen

Tel.:+49(0)711/93134-0
Fax:+49(0)711/93143-140
E-Mail: sida@kiesel.com
- Informing department: *Laboratory, departments of environmental protection and labor protection*
- 1.4 Emergency telephone number: *Poison Information Center Freiburg Tel.: +49(0)761/ 19240 (24h German and English)*

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008 *The product is not classified according to the CLP regulation.*
- 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008 *Void*
- Hazard pictograms *Void*
- Signal word *Void*
- Hazard statements *Void*
- 2.3 Other hazards *This mixture does not contain a substance considered to be persistent, bioaccumulative or toxic (PBT) becomes. This mixture does not contain a substance which is considered to be very persistent or very bioaccumulative (vPvB) (If not mentioned in section 3).*
- Results of PBT and vPvB assessment
- PBT: *Not applicable.*
- vPvB: *Not applicable.*

SECTION 3: Composition/information on ingredients

- 3.2 Chemical characterisation: Mixtures
- Dangerous components: *Void*

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· *Additional information*

For the wording of the listed hazard phrases refer to section 16.

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SECTION 4: First aid measures

· *4.1 Description of first aid measures*

· *General information*

No special measures required.

· *After inhalation*

Ensure adequate supply of fresh air and seek medical advice as a precaution.

· *After skin contact*

The product is not skin irritating.

· *After eye contact*

Rinse opened eye for several minutes under running water.

· *After swallowing*

In case of persistent symptoms consult doctor.

· *4.2 Most important symptoms and effects, both acute and delayed*

No further relevant information available.

· *4.3 Indication of any immediate medical attention and special treatment needed*

No further relevant information available.

SECTION 5: Firefighting measures

· *5.1 Extinguishing media*

· *Suitable extinguishing agents*

The product itself does not burn.

· *5.2 Special hazards arising from the substance or mixture*

Formation of toxic gases is possible during heating or in case of fire.

· *5.3 Advice for firefighters*

· *Protective equipment:*

Wear non-circulation breathing equipment and chemical-protective clothing. Do not inhale explosion gases or fire fumes.

SECTION 6: Accidental release measures

· *6.1 Personal precautions, protective equipment and emergency procedures*

Not required.

· *6.2 Environmental precautions:*

Dilute with much water.

· *6.3 Methods and material for containment and cleaning up:*

Take-up with liquid binding material (sand, diatomaceous earth, acid binding agent, universal binding agent).

· *6.4 Reference to other sections*

No dangerous materials are released.

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

SECTION 7: Handling and storage

· *7.1 Precautions for safe handling*

No special measures required.

· *Information about protection against explosions and fires:*

No special measures required.

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- 7.2 Conditions for safe storage, including any incompatibilities
- Storage
- Requirements to be met by storerooms and containers: *Protect from water.*
- Information about storage in one common storage facility: *Not required.*
- Further information about storage conditions: *None.*
- 7.3 Specific end use(s) *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical systems: *No further data; see item 7.*
- 8.1 Control parameters
- Components with critical values that require monitoring at the workplace:
- Additional information: *The lists that were valid during the compilation were used as basis.*
- 8.2 Exposure controls
- Personal protective equipment
- General protective and hygienic measures *Take off soiled soaked clothing.*
- Breathing equipment: *Not required.*
- Protection of hands: *Recommended*
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves *Rubber gloves*
- 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: *Safety glasses recommended during refilling.*

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
- Appearance:
 - Form: *Pasty*
 - Colour: *Beige*
 - Smell: *Characteristic*
 - Odour threshold: *Not determined.*
- pH-value: *Not determined.*
- Change in condition
 - Melting point/freezing point: *Not determined*
 - Initial boiling point and boiling range: *Not applicable*
 - Flash point: *Not applicable*
 - Inflammability (solid, gaseous) *Not applicable.*

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• **Ignition temperature:**

Decomposition temperature: *Not determined.*

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

• **Explosive properties:** *Product is not explosive.*

• **Critical values for explosion:**

Lower: *Not determined.*

Upper: *Not determined.*

• **Steam pressure:** *Not determined.*

• **Density at 20 °C** *1.67 g/cm³*

• **Relative density** *Not determined.*

• **Vapour density** *Not determined.*

• **Evaporation rate** *Not determined.*

• **Solubility in / Miscibility with**

Water: *Fully miscible*

• **Partition coefficient: n-octanol/water:** *Not determined.*

• **Viscosity:**

dynamic at 20 °C: *80000 mPas*

kinematic: *Not determined.*

• **Solvent content:**

Organic solvents: *0.0 %*

• **9.2 Other information** *The physical data are average values.*

SECTION 10: Stability and reactivity

• **10.1 Reactivity** *No further relevant information available.*

• **10.3 Possibility of hazardous reactions**

No dangerous reactions known

• **10.4 Conditions to avoid**

No further relevant information available.

• **10.5 Incompatible materials:**

No further relevant information available.

• **10.6 Hazardous decomposition products:**

None known.

SECTION 11: Toxicological information

• **11.1 Information on toxicological effects**

• **Acute toxicity** *Based on available data, the classification criteria are not met.*

• **Primary irritant effect:**

• **Skin corrosion/irritation** *Irritation of the skin and mucous membranes is possible.*

• **Serious eye damage/irritation** *Based on available data, the classification criteria are not met.*

• **Respiratory or skin sensitisation** *Based on available data, the classification criteria are not met.*

• **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

• **Germ cell mutagenicity** *Based on available data, the classification criteria are not met.*

• **Carcinogenicity** *Based on available data, the classification criteria are not met.*

• **Reproductive toxicity** *Based on available data, the classification criteria are not met.*

• **STOT-single exposure** *Based on available data, the classification criteria are not met.*

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|---------------------------------|--|
| · <i>STOT-repeated exposure</i> | <i>Based on available data, the classification criteria are not met.</i> |
| · <i>Aspiration hazard</i> | <i>Based on available data, the classification criteria are not met.</i> |

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **12.2 Persistence and degradability:** *No further relevant information available.*
- **12.3 Bioaccumulative potential:** *No further relevant information available.*
- **12.4 Mobility in soil:** *No further relevant information available.*
- **Additional ecological information:**
- **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 bodies or sewage system.*
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*
- **12.6 Other adverse effects:** *No further relevant information available.*

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation:** *Disposal according to official regulations*
- **European waste catalogue**
- **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.*
- **Recommended cleaning agent:** *Water, if necessary with cleaning agent.*

SECTION 14: Transport information

- | | |
|--|------------------------|
| · 14.1 UN-Number | <i>Void</i> |
| · ADR, ADN, IMDG, IATA | <i>Void</i> |
| · 14.2 UN proper shipping name | <i>Void</i> |
| · ADR, ADN, IMDG, IATA | <i>Void</i> |
| · 14.3 Transport hazard class(es) | <i>Void</i> |
| · ADR, ADN, IMDG, IATA | <i>Void</i> |
| · Class | <i>Void</i> |
| · 14.4 Packing group | <i>Void</i> |
| · ADR, IMDG, IATA | <i>Void</i> |
| · 14.5 Environmental hazards: | |
| · Marine pollutant: | <i>No</i> |
| · 14.6 Special precautions for user | <i>Not applicable.</i> |

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- | | |
|---|---|
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | <i>Not applicable.</i> |
| · Transport/Additional information: | <i>Not classified as dangerous in the meaning of transport regulations.</i> |
| · UN "Model Regulation": | <i>Void</i> |

SECTION 15: Regulatory information

- 15.2 Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.*

SECTION 16: Other information

This information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge. It does not constitute a legal warranty regulations. The delivery specifications are contained in the corresponding product sheet.

- Department issuing data specification sheet:
- Abbreviations and acronyms:
 - Health protection and safety*
 - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*
 - IMDG: International Maritime Code for Dangerous Goods*
 - LATA: International Air Transport Association*
 - GHS: Globally Harmonised System of Classification and Labelling of Chemicals*
 - EINECS: European Inventory of Existing Commercial Chemical Substances*
 - ELINCS: European List of Notified Chemical Substances*
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)*
 - PBT: Persistent, Bioaccumulative and Toxic*
 - vPvB: very Persistent and very Bioaccumulative*

- * Data compared to the previous version altered.
- Comment

The information is based on our knowledge we do have so far. However it is not a confirmation of product features and does not establish contractual legal relationship. Use, operation and processing are the responsibility of the customer.

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product identifier
- Trade name Okamul PU; Komp. B
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
Do not use for splashing / spraying
- Sector of Use **SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)**
- Application of the substance / the mixture **Hardening agent/ Curing agent**
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier: **Kiesel Bauchemie GmbH & Co. KG**
Wolf-Hirth-Str. 2

D-73730 Esslingen

Tel.:+49(0)711/93134-0
Fax:+49(0)711/93143-140
E-Mail: sida@kiesel.com
- 1.4 Emergency telephone number: **Poison Information Center Freiburg Tel.: +49(0)761/ 19240 (24h German and English)**

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008

**GHS08 health hazard****Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.****Carc. 2 H351 Suspected of causing cancer.****STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.****GHS07****Skin Irrit. 2 H315 Causes skin irritation.****Eye Irrit. 2 H319 Causes serious eye irritation.****Skin Sens. 1 H317 May cause an allergic skin reaction.****STOT SE 3 H335 May cause respiratory irritation.**

- 2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

- Hazard pictograms

**GHS07 GHS08**

- Signal word

Danger

- Hazard-determining components of labelling:

Diphenylmethandiisocyanat, Isomeren und Homologen 80-100%

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- **Hazard statements**
 - H315 Causes skin irritation.*
 - H319 Causes serious eye irritation.*
 - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.*
 - H317 May cause an allergic skin reaction.*
 - H351 Suspected of causing cancer.*
 - H335 May cause respiratory irritation.*
 - H373 May cause damage to organs through prolonged or repeated exposure.*

- **Precautionary statements**
 - P260 Do not breathe dust/fume/gas/mist/vapours/spray.*
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.*
 - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
 - P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.*
 - P308+P313 IF exposed or concerned: Get medical advice/attention.*
 - P337+P313 If eye irritation persists: Get medical advice/attention.*
 - P302+P352 IF ON SKIN: Wash with plenty of water.*
 - P405 Store locked up.*
 - P403+P233 Store in a well-ventilated place. Keep container tightly closed.*
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Additional information:**
 - Restricted to professional users*
 - EUH204 Contains isocyanates. May produce an allergic reaction.*

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Dangerous components:**

<i>Diphenylmethandiisocyanat, Isomeren und Homologen 80-100%</i>	<i>50-100%</i>
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<i>⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373</i>	
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<i>⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335</i>	
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- **Additional information**
 - Have also a look to point 8 "Exposure controls and personal protection"*
 - For the wording of the listed hazard phrases refer to section 16.*

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

- **After inhalation**
 - Keep patient calm, remove to fresh air, summon medical help.*
 - Symptoms can appear later.*

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- | | |
|--|--|
| <ul style="list-style-type: none"> · After skin contact · After eye contact · After swallowing · 4.2 Most important symptoms and effects, both acute and delayed · Information for doctor · 4.3 Indication of any immediate medical attention and special treatment needed | <p><i>Provide plenty of fresh air.</i></p> <p><i>In case of unconsciousness bring patient into stable side position for transport.</i></p> <p><i>Instantly wash with water and soap and rinse thoroughly.</i></p> <p><i>Instantly rinse with water.</i></p> <p><i>Rinse immediately and thoroughly with eyelids open for 15 minutes under running water, consult eye specialist.</i></p> <p><i>Rinse out the mouth immediately and consume large amounts of water, prevent vomiting, seek medical advice.</i></p> <p><i>No further relevant information available.</i></p> <p><i>Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer dexamethasone aerosol to prevent pulmonary odema.</i></p> <p><i>No further relevant information available.</i></p> |
|--|--|

SECTION 5: Firefighting measures

- | | |
|---|---|
| <ul style="list-style-type: none"> · 5.1 Extinguishing media · Suitable extinguishing agents · 5.2 Special hazards arising from the substance or mixture · 5.3 Advice for firefighters · Protective equipment: · Additional information | <p><i>Dry extinguishing agent, foam, carbon dioxide (CO₂), sprayed water (large amounts).</i></p> <p><i>Use fire fighting measures that suit the environment.</i></p> <p><i>Carbon monoxide, carbon dioxide (CO₂), oxides of nitrogen, hydrogen cyanide, diphenylmethane-4,4'-diisocyanate.</i></p> <p><i>Formation of poisonous gases during heating or in fires.</i></p> <p><i>Formation of toxic gases is possible during heating or in case of fire.</i></p> <p><i>Wear breathing equipment</i></p> <p><i>Wear non-circulation breathing equipment and chemical-protective clothing. Do not inhale explosion gases or fire fumes.</i></p> <p><i>Cool endangered containers with water. Gaseous products from decomposition may be liberated from overheated materials, danger of bursting. Collect residues from fires and contaminated extinguishing water separately, may not be discharged into drainage or into sewage water.</i></p> |
|---|---|

SECTION 6: Accidental release measures

- | | |
|--|---|
| <ul style="list-style-type: none"> · 6.1 Personal precautions, protective equipment and emergency procedures · 6.2 Environmental precautions: · 6.3 Methods and material for containment and cleaning up: | <p><i>Ensure adequate ventilation</i></p> <p><i>Put on breathing apparatus.</i></p> <p><i>No special measures required.</i></p> <p><i>Take-up with liquid binding material (sand, diatomaceous earth, acid binding agent, universal binding agent).</i></p> <p><i>Dispose of contaminated material as waste according to item 13.</i></p> |
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- **6.4 Reference to other sections** *See Section 7 for information on safe handling
 See Section 8 for information on personal protection equipment.
 See Section 13 for information on disposal.*

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** *Do not leave the container standing open.
 Ensure good ventilation/exhaustion at the workplace.
 Prevent formation of aerosols.*
- **Handling** *Ensure adequate extraction/ventilation when emptying or cleaning
 processing machinery. Good extraction and ventilation of storage areas
 and workplaces. Avoid inhalation of vapors. Breathing equipment
 required when handling the product at elevated temperatures.*
- **Information about protection
 against explosions and fires:** *Keep away from sources of ignition - No smoking.
 Keep breathing equipment ready.*
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by
 storerooms and containers:** *Keep tightly sealed, store in a cool, dry and well ventilated place.
 Development of excess CO₂ pressure in isocyanate containers on
 contact with moisture.*
- **Information about storage in one
 common storage facility:** *Do not store together with: acids, amines or products containing
 amines, products which contain groups with active hydrogen.
 Stock/store/load away from foodstuffs, feed and semi-luxury foods/
 tobacco.*
- **Further information about
 storage conditions:** *Storage temperature: min. 15 °C; storage temperature: max. 25 °C.
 Keep container tightly sealed.*
- **7.3 Specific end use(s)** *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

- **Additional information about
 design of technical systems:** *(See item 7)*
- **8.1 Control parameters**

- **Components with critical values that require monitoring at the workplace:**

Diphenylmethandiisocyanat, Isomeren und Homologen 80-100%

WEL	<i>Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ Sen; as -NCO</i>
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- **Additional information:** *The lists that were valid during the compilation were used as basis.*
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic
 measures** *Do not eat, drink or smoke while working.*

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- Avoid contact with skin, eyes or clothing.*
Wash hands and/or face prior to breaks and finishing work.
Ensure skin cleaning and skin care after working.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
- *Breathing equipment:* *In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.*
 - *Protection of hands:* *Rubber or plastic gloves, impermeable gloves made of synthetic rubber, polybutadiene. Not to be used: gloves made of PVC, polyethylene. Protective gloves. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*
 - *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:* *Tightly sealed safety glasses.*
 - *Body protection:* *Safety shoes, sealed working clothing.*

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **Appearance:**
 - Form:* *Fluid*
 - Colour:* *Brown*
- *Smell:* *earthy, slightly musty.*
- *Odour threshold:* *Not determined.*
- *pH-value:* *n.a.*
- **Change in condition**
 - Melting point/freezing point:* *41 °C*
 - Initial boiling point and boiling range:* *>200 °C ((DIN))*
- *Flash point:* *> 100 °C ((DIN))*
- *Inflammability (solid, gaseous)* *Not applicable.*
- *Ignition temperature:* *400 °C ((DIN))*
- *Decomposition temperature:* *Not determined.*
- *Self-inflammability:* *- °C*
- *Explosive properties:* *Product is not explosive.*
- **Critical values for explosion:**
 - Lower:* *Not determined.*
 - Upper:* *Not determined.*

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• <i>Steam pressure at 25 °C:</i>	<i>0.0002 hPa ((DIN))</i>
• <i>Density at 20 °C</i>	<i>1.275 g/cm³</i>
• <i>Relative density</i>	<i>Not determined.</i>
• <i>Vapour density</i>	<i>Not determined.</i>
• <i>Evaporation rate</i>	<i>Not determined.</i>
• <i>Solubility in / Miscibility with Water:</i>	<i>Reacts slowly with water at the surface thereby liberating CO₂ to give an insoluble high-melting poly-urea product.</i>
• <i>Partition coefficient: n-octanol/water:</i>	<i>n.a.</i>
• <i>Viscosity:</i> <i>dynamic at 20 °C:</i> <i>kinematic:</i>	<i>220 mPas</i> <i>Not determined.</i>
• <i>Solvent content:</i> <i>Organic solvents:</i>	<i>0.0 %</i>
• <i>9.2 Other information</i>	<i>keine</i>

SECTION 10: Stability and reactivity

• <i>10.1 Reactivity</i>	<i>No further relevant information available.</i>
• <i>10.3 Possibility of hazardous reactions</i>	<i>Dangerous reaction from action with: amines or product containing amines, salts of heavy metals, substances which contain groups with active hydrogen.</i>
• <i>10.4 Conditions to avoid</i>	<i>No further relevant information available.</i>
• <i>10.5 Incompatible materials:</i>	<i>acids, water</i>
• <i>10.6 Hazardous decomposition products:</i>	<i>No decomposition if stored and handled correctly.</i>

SECTION 11: Toxicological information

• <i>11.1 Information on toxicological effects</i>	
• <i>Acute toxicity</i>	<i>Based on available data, the classification criteria are not met.</i>

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

Diphenylmethandiisocyanat, Isomeren und Homologen 80-100%

<i>Oral</i>	<i>LD50</i>	<i>>10000 mg/kg (rat)</i>
<i>Dermal</i>	<i>LD50</i>	<i>>10000 mg/kg (rab)</i>
<i>Inhalative</i>	<i>LC50/4 h</i>	<i>0.493 mg/l (rat)</i>

• <i>Primary irritant effect:</i>	
• <i>Skin corrosion/irritation</i>	<i>Causes skin irritation.</i>
• <i>Serious eye damage/irritation</i>	<i>Causes serious eye irritation.</i>
• <i>Respiratory or skin sensitisation</i>	<i>May cause allergy or asthma symptoms or breathing difficulties if inhaled.</i> <i>May cause an allergic skin reaction.</i>
• <i>Subacute to chronic toxicity:</i>	<i>Duration of trials: 2 years:</i> <i>Application: inhalative/rats/>0.2,<1 mg/m³/ aerosol (PMDI) Result: by inhalative adsorption, the substance causes extensive local irritation in</i>

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rats with epithelial damage. In addition to this, local tumors developed following this damage in some animals.

· *Experience with humans:*

Can lead to strong irritation of the eyes and respiratory tract, depending on the concentration. Irritation of the skin and mucous membranes can occur in cases of prolonged action by the product. A delay in the occurrence of symptoms is possible, e.g. coughing, difficulties in breathing, feeling of confinement in the chest.

Sensitization: a sensitization of the skin cannot be ruled out for persons of over-sensitivity. Danger of sensitization for repeated contact with the skin. Can cause sensitization of the respirator tract in cases of allergy. Avoid inhalation and contact with the skin. Experience at the workplace indicates that there are no known carcinogenic effects on humans.

· *Additional toxicological information:*

Detrimental effects from handling the product in accordance with procedures are not known to date.

· *CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)*

Based on available data, the classification criteria are not met.

· *Germ cell mutagenicity*

Suspected of causing cancer.

· *Carcinogenicity*

Based on available data, the classification criteria are not met.

· *Reproductive toxicity*

May cause respiratory irritation.

· *STOT-single exposure*

May cause damage to organs through prolonged or repeated exposure.

· *STOT-repeated exposure*

Based on available data, the classification criteria are not met.

· *Aspiration hazard*

SECTION 12: Ecological information

The product contains diphenylmethane-4,4'-diisocyanate, for which the following information is applicable:

· *12.1 Toxicity*

· *Aquatic toxicity:*

Diphenylmethandiisocyanat, Isomeren und Homologen 80-100%

EC50(3h) =>1000 mg/l (Belebtschlamm Bakterien)

LC 50 (96h) >1000 mg/l (Zebrafisch)

>1000 mg/l (Akute Fischtoxizität (Zebrafisch))

· *12.2 Persistence and degradability Evaluation:*

Reacts slowly with water at the surface thereby liberating CO₂ to give an insoluble high melting poly-urea product. According to previous experience, this product is inert and not degradable.

· *12.3 Bioaccumulative potential*

No further relevant information available.

· *12.4 Mobility in soil*

No further relevant information available.

· *Ecotoxicological effects:*

Daphnia toxicity (acute): EC/LC50 (h): >1000 mg/l

Bacterial toxicity: EC/LC0 (h): > 10 000 mg/l

Fish toxicity: EC/LC0 (96 h): > 10 000 mg/l

· *Additional ecological information:*

The product may not enter waters without prior treatment (biological water treatment plant). Prevent penetration into the earth and waters.

· *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 bodies or sewage system.

· *12.5 Results of PBT and vPvB assessment*

· *PBT:*

Not applicable.

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- | | | |
|------------------------------|---|--------------------|
| · vPvB: | <i>Not applicable.</i> | (Contd. of page 7) |
| · 12.6 Other adverse effects | <i>No further relevant information available.</i> | |

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
- Recommendation *Disposal according to official regulations*
- European waste catalogue
- 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.*

SECTION 14: Transport information

- | | |
|---|---|
| · 14.1 UN-Number | <i>Void</i> |
| · ADR, ADN, IMDG, IATA | |
| · 14.2 UN proper shipping name | <i>Void</i> |
| · ADR, ADN, IMDG, IATA | |
| · 14.3 Transport hazard class(es) | <i>Void</i> |
| · ADR, ADN, IMDG, IATA | |
| · Class | |
| · 14.4 Packing group | <i>Void</i> |
| · ADR, IMDG, IATA | |
| · 14.5 Environmental hazards: | |
| · Marine pollutant: | <i>No</i> |
| · 14.6 Special precautions for user | <i>Not applicable.</i> |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | <i>Not applicable.</i> |
| · Transport/Additional information: | <i>Not classified as dangerous in the meaning of transport regulations.</i> |
| · UN "Model Regulation": | <i>Void</i> |

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I *None of the ingredients is listed.*
- REGULATION (EC) No 1907/2006 ANNEX XVII *Conditions of restriction: 3*

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· 15.2 Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.*

SECTION 16: Other information

Chapters which have been revised from the previous issue are marked "**".

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

(n.a. - not applicable, n.d. - not determined)

This information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge. It does not constitute a legal warranty regulations. The delivery specifications are contained in the corresponding product sheet.

· **Relevant phrases**

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Department issuing data specification sheet:**

· **Abbreviations and acronyms:**

Health protection and safety

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· *** Data compared to the previous version altered.**

· **Comment**

The information is based on our knowledge we do have so far. However it is not a confirmation of product features and does not establish contractual legal relationship. Use, operation and processing are the responsibility of the customer.