

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 09/21/2016

Version number 17

Reviewed on 09/21/2016

### 1 Identification

- **Product identifier**
  - **Trade name:** Jowapur 1 K J PUR 686.25
  - **Article number:** 68625
  - **Application of the substance / the mixture** Adhesives
  - **Uses advised against** Restricted to professional users.
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**  
JOWAT Swiss AG  
Chemische & Leimfabrik  
CH - 6033 Buchrain  
Tel.: +41 (0)41-445 1111
  - **Department issuing SDS:**  
Environmental management  
Ellen Lange / Tina Friedrich / Jan-Peter Boelcke  
Fon +49 5231 749 218 / 270 / 211  
e-mail: umweltmanagement@jowat.de
  - **Information provided by department:**  
Jowat Corporation  
5608 Uwharrie Rd.  
Archdale, NC 27263  
P.O.Box 1368  
High Point, NC 27261  
Tel.: +1 336 434-9000  
Fax: +1 336 434-9019  
E-Mail: info@jowat.com
  - **Emergency telephone number:** 1 800 424 9300 (Chemtrec 24 hours service)

### 2 Hazard(s) identification

- **Classification of the substance or mixture**



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

Acute Tox. 4 H332 Harmful if inhaled.  
 Skin Irrit. 2 H315 Causes skin irritation.  
 Eye Irrit. 2A H319 Causes serious eye irritation.  
 Skin Sens. 1 H317 May cause an allergic skin reaction.  
 STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS07 GHS08

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- **Signal word** Danger
- **Hazard-determining components of labeling:**  
diphenylmethane diisocyanate
- **Hazard statements**  
H332 Harmful if inhaled.  
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/vapors/spray.  
P280 Wear protective gloves.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
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.
- **Classification system**
  - **NFPA ratings (scale 0-4)**  
Health = 1  
Fire = 0  
Reactivity = 0
  - **HMIS ratings (scale 0-4)**  
Health = \*2  
Flammability = 0  
Reactivity = 0
- **Other hazards**
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:**  
Adhesive.  
Isocyanate resin

- **Dangerous components:**

26447-40-5	diphenylmethane diisocyanate	25 - <50%
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- **Additional information**

In case any risk phrases are listed, please refer to paragraph 16 for the exact wording.

### 4 First-aid measures

- **Description of 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 call in physician to be on the safe side.  
In case of unconsciousness place patient in stable side position for transportation.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**  
Flush out opened eye for several minutes under running water. If symptoms persist, consult physician.
- **After swallowing** If symptoms persist consult physician.

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- **Information for physician**
  - **Most important symptoms and effects, both acute and delayed**  
Asthma attacks  
Allergic reactions
  - **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
  - **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol-resistant foam.
- **Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.  
In case of fire, the following can be released:  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide (CO)  
Hydrogen cyanide (HCN)
- **Advice for firefighters**
  - **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear respiratory protective device.  
Do not inhale explosion gases or combustion gases.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Do not allow product to reach sewer system or open water.  
Prevent from spreading (e.g. by damming-in or oil barriers).
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, general-purpose binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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 disposal information.

### 7 Handling and storage

- **Handling**
  - **Precautions for safe handling**  
Extractors are required on all machines used for thermal processing.  
Store in cool, dry place in tightly closed containers.  
Provide good ventilation/extraction system in the workplace.  
Prevent formation of aerosols.
  - **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage**
    - **Requirements to be met by storage facilities and containers:** No special requirements.
    - **Information concerning mixed product storage facilities:** Not required.
    - **Further information on storage conditions:**  
Keep container tightly sealed.  
Store in dry conditions.  
Protect from humidity and water.
  - **Storage class** 12
- **Specific end use(s)** No further relevant information available.

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### 8 Exposure controls/personal protection

· **Additional information technical layout:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring in the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **CAS No. Designation of material % Type Value Unit**

· **Additional Occupational Exposure Limit Values for possible hazards during processing:**

**101-68-8 diphenylmethane diisocyanate**

PEL	Ceiling limit value: 0.2 mg/m <sup>3</sup> , 0.02 ppm
REL	Long-term value: 0.05 mg/m <sup>3</sup> , 0.005 ppm Ceiling limit value: 0.2* mg/m <sup>3</sup> , 0.02* ppm *10-min
TLV	Long-term value: 0.051 mg/m <sup>3</sup> , 0.005 ppm

· **Additional information:**

The lists that were valid at the date of compilation of this SDS were used as basis.

· **Exposure controls**

· **Personal protective equipment**

· **General protection and hygiene precautions**

The standard precautionary measures for handling chemicals should be observed.

Keep away from food, beverages and animal feed.

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.

Do not eat or drink while working.

· **Breathing equipment:**

Use suitable respiratory protective device in case of insufficient ventilation.

Short term filter device:

Filter A/B/P2.

· **Protection of hands:** Impervious gloves

· **Material of gloves** Nitrile rubber, NBR

· **Penetration time of glove material**

Please contact the glove manufacturer for the exact time of penetration/resistance level and observe this limit.

· **In case of permanent contact in work areas where the risk of injury is low (e.g. labs) gloves made of the following material are suitable:**

PVC gloves

Butyl rubber, BR

Fluorocarbon rubber (Viton)

· **In case of permanent contact, gloves made of the following materials are suitable:**

Butyl rubber, BR

Fluorocarbon rubber (Viton)

· **In case of skin contact of maximum of 15 minutes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

· **The following materials are unsuitable for gloves:**

Leather gloves

Strong gloves

· **Eye protection:**

Goggles recommended during refilling and spraying.

Safety glasses

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### 9 Physical and chemical properties

<ul style="list-style-type: none"> <li>· <b>Information on basic physical and chemical properties</b></li> <li>· <b>General Information</b></li> <li>· <b>Appearance:</b></li> <li>  · <b>Form:</b> Viscous</li> <li>  · <b>Color:</b> According to product specification</li> <li>· <b>Odor:</b> Characteristic</li> <li>· <b>Odor threshold:</b> Not determined.</li> </ul>	
· <b>pH-value:</b>	Not determined.
<ul style="list-style-type: none"> <li>· <b>Change in condition</b></li> <li>  · <b>Melting point/Melting range:</b> undetermined</li> <li>  · <b>Boiling point/Boiling range:</b> 208 °C (406 °F)</li> </ul>	
· <b>Flash point:</b>	Not applicable
· <b>Flammability (solid, gaseous)</b>	Not applicable.
· <b>Ignition temperature:</b>	> 500 °C (> 932 °F)
· <b>Decomposition temperature:</b>	Not determined.
· <b>Self-igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
<ul style="list-style-type: none"> <li>· <b>Explosion limits:</b></li> <li>  · <b>Lower:</b> 0.4 Vol %</li> <li>  · <b>Upper:</b> Not determined.</li> </ul>	
· <b>Vapor pressure:</b>	Not determined.
<ul style="list-style-type: none"> <li>· <b>Density at 20 °C (68 °F):</b> 1.15 g/cm<sup>3</sup> (9.597 lbs/gal)</li> <li>  · <b>Relative density</b> Not determined.</li> <li>  · <b>Vapor density</b> Not determined.</li> <li>  · <b>Evaporation rate</b> Not determined.</li> </ul>	
<ul style="list-style-type: none"> <li>· <b>Solubility in / Miscibility with</b></li> <li>  · <b>Water:</b> Not miscible or difficult to mix</li> </ul>	
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
<ul style="list-style-type: none"> <li>· <b>Viscosity:</b></li> <li>  · <b>dynamic at 20 °C (68 °F):</b> 8500 mPas</li> <li>  · <b>kinematic:</b> Not determined.</li> </ul>	
<ul style="list-style-type: none"> <li>· <b>Solvent content:</b></li> <li>  · <b>Organic solvents:</b> 0.1 %</li> </ul>	
<ul style="list-style-type: none"> <li>  · <b>Solid content:</b> 99.5 %</li> <li>· <b>Other information</b> No further relevant information available.</li> <li>  · <b>VOC - Volatile Organic Compounds</b></li> <li>    · <b>European Union</b> 0.13 %</li> <li>    · <b>Switzerland</b> 0.13 %</li> <li>    · <b>U.S.A (less water and less exempts)</b> 1.5 g/l / 0.01 lb/gl</li> </ul>	

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
- Reacts with water
- Reacts with humid air

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- Reacts with strong acids and alkali
- Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
  - Nitrogen oxides
  - Hydrogen cyanide (prussic acid)
  - Isocyanate
  - Flammable gases/vapors
  - Carbon monoxide and carbon dioxide
  - Nitrogen oxides (NOx)

### 11 Toxicological information

#### · Information on toxicological effects

##### · Acute toxicity:

##### · LD/LC50 values that are relevant for classification:

##### 26447-40-5 diphenylmethane diisocyanate

Oral	LD50 oral	10000 mg/kg (rat)
Dermal	LD50 dermal	10000 mg/kg (rabbit)
Inhalative	LC50 / 4 h	0.49 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 (Directive 1999/45/EC of the European Parliament and of the Council) as issued in the latest version:

Harmful  
Irritant

##### · Carcinogenic categories

##### · IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

##### · NTP (National Toxicology Program)

None of the ingredients is listed.

##### · OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

### 12 Ecological information

#### · Toxicity

##### · Aquatic toxicity:

##### 26447-40-5 diphenylmethane diisocyanate

LC0	> 1000 mg/l (zebrafish)
EC50 / 24 h	> 1000 mg/l (water flea)
EC50 / 3 h	> 100 mg/l (pseudomonas putida)

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.

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<b>· Chemicals known to cause reproductive toxicity for females</b>
None of the ingredients is listed.
<b>· Chemicals known to cause reproductive toxicity for males</b>
None of the ingredients is listed.
<b>· Chemicals known to cause developmental toxicity</b>
None of the ingredients is listed.
<b>· Canadian ingredient disclosure list</b>
<b>· Limit 0,1 %</b>
None of the ingredients is listed.
<b>· Limit 1 %</b>
None of the ingredients is listed.
<b>· Cancerogeny categories</b>
<b>· EPA (Environmental Protection Agency)</b>
None of the ingredients is listed.
<b>· TLV (Threshold Limit Value established by ACGIH)</b>
None of the ingredients is listed.
<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>
None of the ingredients is listed.
<b>· Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.

### 16 Other information

These data are based on our present state of information. They shall, however, not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. All standard industrial precautions apply, concerning protection of health, and safe handling. The recommendations have to be examined in the context of the application for which the product is intended, and observed as necessary.

· **Date of preparation / last revision** 09/21/2016 / 16

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

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

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

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 in paragraphs with asterisk are revised in comparison to the previous version.**