

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2014

Revision: 21.07.2014

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

- **1.1 Product identifier**
- Trade name: Bijlard PU-Classic

- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
 SU3 Industrial uses: uses of substances as such or in preparations at industrial sites
 SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **1.2 Product category** PC1 Adhesives, sealants
- **Process category**
 PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises
- **Environmental release category** ERC5 Industrial use resulting in inclusion into or onto a matrix
- **Application of the substance / the preparation** : Adhesive

- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Bijlard International
 Postus 398
 2700 AJ Zoetermeer
 Platinastraat 141
 2718 SR Zoetermeer
 tel: +31 (0)79 343 75 38
 fax: +31 (0)79 343 75 39
 info@bijlard.com
 www.bijlard.com
 www.ankerweld.org

- **1.4 Emergency telephone number:** +31 (0)30 274 88 88

SECTION 2: Hazards identification

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

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 Xn; Harmful
 R20-40-48/20: Harmful by inhalation. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation.

- Xn; Sensitising
 R42/43: May cause sensitisation by inhalation and skin contact.

- Xi; Irritant
 R36/37/38: Irritating to eyes, respiratory system and skin.

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: **Bijlard PU-Classic**

(Contd. of page 1)

- **Classification system:**

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

- **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:**

diphenylmethanediisocyanate, isomers and homologues

- **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**

P284 In case of inadequate ventilation wear respiratory protection.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P260 Do not breathe vapours.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents and container in accordance with local regulations.

- **Phrases in case of sale to the general public**

Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

P405 Store locked up.

- **Advised precautionary statements** Keep out of reach of children.

- **Additional information :**

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 characterization: Mixtures**

- **Description:** Adhesive containing a polyurethane prepolymer based on diphenylmethanediisocyanate

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: **Bijlard PU-Classic**

(Contd. of page 2)

· **Dangerous components:**

9016-87-9	diphenylmethanediisocyanate, isomers and homologues ✘ Xn R20-40-48/20; ✘ Xn R42/43; ✘ Xi R36/37/38 Carc. Cat. 3 ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	20-50%
-----------	---	--------

· **Additional information :**

Contains 4,4'-methylenediphenyl diisocyanate (CAS : 101-68-8, EINECS : 202-966-0, Reg. nr. : 01-2119457014-47)

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information** Immediately remove any clothing soiled by the product.

· **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.

· **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

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

Asthma attacks

Headache

Dizziness

Coughing

Nausea

· **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** CO₂, extinguishing powder or water spray.

· **For safety reasons unsuitable extinguishing agents** Water with full jet.

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

In case of fire, the following can be released:

Carbon monoxide (CO)

Nitrogen oxides (NO_x)

Hydrogen cyanide (HCN)

In certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:

Isocyanates

· **5.3 Advice for firefighters**

· **Protective equipment:** Wear self-contained respiratory protective device.

GB

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: **Bijlard PU-Classic**

(Contd. of page 3)

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Particular danger of slipping on leaked/spilled product.
Ensure adequate ventilation.
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2 Environmental precautions:** Do not allow product to reach sewage system or any water course.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.
Do not close them (reaction with water forming carbon dioxide).
- **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Protect from humidity and water.
- **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 limit values that require monitoring at the workplace:**

9016-87-9 diphenylmethanediisocyanate, isomers and homologues

WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
-----	---

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

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

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

WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
-----	---

- **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 5)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: **Bijlard PU-Classic**

(Contd. of page 4)

- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
 Clean skin thoroughly immediately after handling the product.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Do not inhale gases / fumes / aerosols.
 Do not eat, drink, smoke while working.
 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 respiratory protective device that is independent of circulating air.
 Short term filter device:
 Filter AB
- **Protection of hands:**
 Nitrile rubber 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.
- **Eye protection:** Tightly sealed goggles.
- **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Viscous
Colour:	Brown
Odour:	Light
- **Change in condition**
 Melting point/Melting range: undetermined
 Boiling point/Boiling range: > 200 °C
- **Flash point:** > 200 °C (ISO 1523)
- **Self-ignition temperature:** > 300 °C
- **Decomposition temperature:** > 140 °C
- **Self igniting:** Product is not selfigniting at room temperature.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density at 20 °C:** 1.12
- **Solubility in / Miscibility with Water:** Insoluble
- **Viscosity:**
 dynamic at 20 °C: 15 000 mPa.s
- **Solvent content:**
 Organic solvents: 0 %

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: **Bijlard PU-Classic**

(Contd. of page 5)

- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with alcohols, amines, aqueous acids and alkalis.
Reacts with water forming carbon dioxide. Danger of receptacles bursting because of vapour overpressure.
- **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 to our knowledge at room temperature.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **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:**
Persons having a history of asthma or of allergies, chronic or recurring difficulties in breathing, must never use this preparation.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Carc. 2

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 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow product to reach ground water, water course 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.

GB

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: **Bijlard PU-Classic**

(Contd. of page 6)

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must be disposed of in an incinerator for hazardous waste according to official regulations.
- **Waste disposal key:** 08 04 09*
- **Uncleaned packaging :**
- **Recommendation:**
Disposal must be made according to official regulations.
The packaging may be decontaminated for example with the following mixture : water + 5 to 10 % sodium carbonate + 0.2 to 1 % liquid detergent. Add this mixture to the residues in the unclosed container in order to allow carbon dioxide to escape. Let react during several days until no reaction occurs.

SECTION 14: Transport information

- | | |
|---|-----------------------|
| · 14.1 UN-Number
· ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name
· ADR, ADN, IMDG
· IATA | Void
Not regulated |
| · 14.3 Transport hazard class(es)
· ADR, ADN, IMDG, IATA
· Class | Void |
| · 14.4 Packing group
· ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards:
· Marine pollutant: | No |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 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.
This data sheet is particularly in accordance with the european regulations 1907/2006/EC, 1272/2008/EC and their amendments ; it is written according to annex II of the european regulation 453/2010/EC.

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: **Bijlard PU-Classic**

(Contd. of page 7)

- **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.
- R20 Harmful by inhalation.
- R36/37/38 Irritating to eyes, respiratory system and skin.
- R40 Limited evidence of a carcinogenic effect.
- R42/43 May cause sensitisation by inhalation and skin contact.
- R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

- **Department issuing MSDS:** Laboratory

- **Contact:** cf. § 1

- **Review :**

An asterisk in the margin of a paragraph means amendments in comparison to the former version.

- **Abbreviations and acronyms:**

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 Harmonized 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)

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

GB

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: **Bijlard PU-Classic**

(Contd. of page 8)

Annex: Exposure scenario

- **Name** 4,4'-methylenediphenyl diisocyanate
- **Short title of the exposure scenario**
Industrial use for rigid foam, coatings and adhesives and sealants
Professional end use in rigid foam, coatings, adhesives and sealants and other composite material
Consumer end use in rigid foam, coatings and adhesives and sealants
- **Sector of Use**
 SU3 Industrial uses: uses of substances as such or in preparations at industrial sites
 SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
 SU21 Consumer uses: Private households / general public / consumers
- **Product category**
 PC1 Adhesives, sealants
 PC9a Coatings and paints, thinners, paint removers
 PC32 Polymer preparations and compounds
- **Process category**
 PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises
 PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
 PROC7 Industrial spraying
 PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
 PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
 PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
 PROC15 Use as laboratory reagent
- **Environmental release category**
 ERC5 Industrial use resulting in inclusion into or onto a matrix
 ERC8c Wide dispersive indoor use resulting in inclusion into or onto a matrix
 ERC8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix
 ERC2 Formulation of preparations
- **Conditions of use** According to directions for use.
- **Duration and frequency**
 up to 8 hour(s) per day
 For consumer end use in rigid foam, coatings and adhesives and sealants :
 Covers use up to 1 day/year
 Covers skin contact area up to 2 cm²
- **Physical parameters**
- **Physical state** Liquid
- **Concentration of the substance in the mixture** Raw material.
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure**
 Local fresh water dilution factor: 10
 Local marine water dilution factor : 100
- **Other operational conditions affecting worker exposure**
 Avoid contact with the skin and eyes.
 Indoor application.
 Outdoor application.
 Do not breathe gas/vapour/aerosol.
- **Other operational conditions affecting consumer exposure** Keep out of the reach of children.
- **Other operational conditions affecting consumer exposure during the use of the product**
 Not applicable.

(Contd. on page 10)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2014

Revision: 21.07.2014

Trade name: **Bijlard PU-Classic**

(Contd. of page 9)

- **Risk management measures**

- **Worker protection**

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Provide extraction ventilation at points where emissions occur. Provide extract ventilation to material transfer points and other openings. Handle in a fumecupboard or under extract ventilation.

If above technical/organisational control measures are not feasible, then adopt following PPE: wear a respirator conforming to EN140 with Type A filter or better.

Use suitable eye protection and gloves. Wear suitable coveralls to prevent exposure to the skin.

- **Organisational protective measures**

Ensure that activities are executed by specialists or authorised personnel only.

- **Technical protective measures**

Ensure that suitable extractors are available on processing machines

Work only in fume cupboard.

Ensure good ventilation/exhaustion at the workplace.

- **Personal protective measures**

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Tightly sealed goggles.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Short term filter device:

Filter A2B2-P3

Butyl, nitrile or polychloroprene rubber gloves of superior quality.

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.

Protective work clothing.

- **Measures for consumer protection**

Ensure adequate labelling.

Keep locked up and out of the reach of children.

Protective gloves

Tightly sealed goggles.

- **Environmental protection measures**

- **Air** No special measures required.

- **Water** Do not allow to reach ground water, water bodies or sewage system.

- **Soil** Prevent contamination of soil.

- **Disposal measures** Disposal must be made according to official regulations.

- **Disposal procedures**

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

- **Exposure estimation**

- **Worker (dermal)**

The highest dermal exposure to be expected is 5.0 mg / kg / day.

(estimations using EASE)

- **Worker (inhalation)** The highest inhalative exposure to be expected is 0.05 ppm.

- **Environment**

Prediction of highest expected environmental exposure (soil) is 0.27 mg/kg dry weight

The highest environmental exposure to be expected for surface waters is 0.0687 mg / L.

Prediction of highest expected environmental exposure (sea water) is 0.000543 mg/kg

- **Consumer**

The highest inhalative exposure to be expected for consumers is 0.020 ppm.

The highest dermal exposure to be expected for consumers is 0.069 mg / kg / day.

(Consexpo model)

- **Guidance for downstream users**

For the risk assessment, the tools recommended by ECHA can be used.