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

Printing date 27.04.2023 *Version 4 (replaces version 3)* *Revision: 27.04.2023*

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

· **1.1 Product identifier**

· **Trade name: OTTOCOLL P 86**
· **UFI:** 89G0-80MQ-Q006-KV00
· **Product category** PC1 Adhesives, sealants
· **Application of the substance / the mixture** Preparation of adhesives

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Hermann Otto GmbH
Krankenhausstraße 14
D-83413 Fridolfing
Tel.: 0049/(0)8684/908-0
Fax.: 0049/(0)8684/908-1840

· **Further information obtainable from:**
Tel.: 0049- (0)8684- 908- 2363 (-4300)
E-Mail: alois.parzinger@otto-chemie.de
· **1.4 Emergency telephone number:**
Tel.: 0049- (0) 89- 192 40 (emergency telephone no.)
+44 1865 407333 (Carechem 24)

SECTION 2: Hazards identification

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

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.

Acute Tox. 4 H332 Harmful if inhaled.
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 GB CLP regulation.
· **Hazard pictograms** GHS07, GHS08
· **Signal word** Danger

· **Hazard-determining components of labelling:**
diphenylmethanediisocyanate,isomeres and homologues
· **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.

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H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

P102	Keep out of reach of children.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves / eye protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P312	IF INHALED: Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

· **Additional information:**
Contains isocyanates. May produce an allergic reaction.
As from 24 August 2023 adequate training is required before industrial or professional use.

· **2.3 Other hazards**
Information according to UK REACH- Annex XVII.56
- 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.

· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:**
Prepolymer, based on diphenylmethandiisocyanat with monomeric and polymeric contents
· **Dangerous components:**

CAS: 72088-97-2 Reg.nr.: EG: Polymer	Isocyanate- Prepolymer MDI based Resp. Sens. 1, H334; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204	<50%
CAS: 101-68-8 EINECS: 202-966-0 Reg.nr.: 01-2119457014-47-xxxx	diphenylmethane-4,4'-di-isocyanante 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, EUH204 Specific concentration limits: Skin Irrit. 2; H315: C ≥ 5 % Eye Irrit. 2; H319: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; H335: C ≥ 5 %	<10%

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CAS: 5873-54-1 EINECS: 227-534-9 Reg.nr.: 01-2119480143-45-xxxx	diphenylmethane-2,4'-diisocyanate 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, EUH204 Specific concentration limits: Skin Irrit. 2; H315: C ≥ 5 % Eye Irrit. 2; H319: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; H335: C ≥ 5 %	<5%
CAS: 26447-40-5 EINECS: 247-714-0 Reg.nr.: 01-2119457015-45-xxxx	Methylenediphenyl diisocyanate, mixed isomers 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, EUH204 Specific concentration limits: Skin Irrit. 2; H315: C ≥ 5 % Eye Irrit. 2; H319: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; H335: C ≥ 5 %	<5%

· **Additional information** For the wording of the listed hazard 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.
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.
· **After skin contact**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact**
Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing**
Do not induce vomiting; call for medical help immediately. Show container or label.

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SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents** Water with full jet.
· **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
Formation of toxic gases is possible during heating or in case of fire.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Mount respiratory protective device.
Do not inhale explosion gases or combustion gases.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation

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· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
· **6.4 Reference to other sections** See Section 8 for information on personal protection equipment.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
see item 8: Personal protective equipment
· **Information about fire - and explosion protection:** Keep ignition sources away - Do not smoke.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.
· **Information about storage in one common storage facility:** Store away from foodstuffs.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**

101-68-8 diphenylmethane-4,4'-di-isocyanante
WEL Short-term value: 0.07 mg/m³
Long-term value: 0.02 mg/m³
Sen; as -NCO

5873-54-1 diphenylmethane-2,4'-diisocyanate
WEL Short-term value: 0.07 mg/m³
Long-term value: 0.02 mg/m³
Sen; as -NCO

· **Ingredients with biological limit values:**

101-68-8 diphenylmethane-4,4'-di-isocyanante
BMGV 1 µmol creatinine/mol
Medium: urine
Sampling time: At the end of the period od exposure
Parameter: isocyanate-derived diamine

5873-54-1 diphenylmethane-2,4'-diisocyanate
BMGV 1 µmol creatinine/mol
Medium: urine
Sampling time: At the end of the period od exposure
Parameter: isocyanate-derived diamine

· **CAS No. Designation of material % Type Value Unit**
· **Additional Occupational Exposure Limit Values for possible hazards during processing:**

101-68-8 diphenylmethane-4,4'-di-isocyanante
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.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see item 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures**
The usual precautionary measures are to be adhered to when handling chemicals.

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Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
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.
· **Hand protection** Protective gloves.
· **Material of 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.
Recommended glove types: nitrile rubber
Recommended thickness of the material: >0,4 mm
· **Penetration time of glove material** Breakthrough time: 10 - 30 min
· **Eye/face protection** Safety glasses
· **Body protection:** Protective work clothing.

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**

· **Physical state**	Solid.
· **Colour:**	According to product specification
· **Odour:**	Characteristic
· **Melting point/freezing point:**	undetermined
· **Boiling point or initial boiling point and boiling range**	undetermined
· **Lower and upper explosion limit**	
· **Lower:**	not applicable
· **Upper:**	not applicable
· **Flash point:**	Not applicable
· **Decomposition temperature:**	Not determined.
· **pH**	Not determined.
· **Viscosity:**	Not determined.
· **Solubility**	
· **Water:**	Hydrolized
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure:**	Not determined.
· **Density and/or relative density**	
· **Density:**	see technical data sheet
· **Relative density**	Not determined.
· **Vapour density**	Not applicable.
· **Particle characteristics**	undetermined

· **9.2 Other information**

· **Form:**	pasty
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.

· **Information with regard to physical hazard classes**

· **Aerosols**	Void
· **Flammable liquids**	Void

SECTION 10: Stability and reactivity

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

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· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
Avoid strong heating.
· **10.3 Possibility of hazardous reactions**
Reacts with alcohols
Reacts with amines
Exothermic reaction
· **10.5 Incompatible materials:**
If isocyanate gets in contact with humidity, carbon dioxide is released. The carbon dioxide causes an overpressure in closed containers.
· **10.6 Hazardous decomposition products:** see item 5.2

*
SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Harmful if inhaled.
· **LD/LC50 values relevant for classification:**

101-68-8 diphenylmethane-4,4'-di-isocyanante

Oral	LD50	>10,000 mg/kg (rat)
Dermal	LD50	>9,400 mg/kg (rbt)

5873-54-1 diphenylmethane-2,4'-diisocyanate

Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	9,400 mg/kg (rbt)
Inhalative	LC50/4 h	0.387 mg/l (rat)

26447-40-5 Methylenediphenyl diisocyanate, mixed isomers

Oral	LD50	>10,000 mg/kg (rat)
Dermal	LD50	>9,400 mg/kg (rab)
Inhalative	LC50/4 h	0.49 mg/l (rat)

· **Skin corrosion/irritation** Causes skin irritation.
· **Serious eye damage/irritation** Causes serious eye irritation.
· **Respiratory or skin sensitisation**
Sensitive people may react strongly to minimal concentrations. We advise asthmatics and people who tend to diseases of the respiratory tracts against the contact with this product.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
· **Carcinogenicity** Suspected of causing cancer.
· **STOT-single exposure** May cause respiratory irritation.
· **STOT-repeated exposure** May cause damage to organs through prolonged or repeated exposure.
· **11.2 Information on other hazards**
· **Endocrine disrupting properties**
None of the ingredients is listed.

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SECTION 12: Ecological information

· **12.2 Persistence and degradability**
· **Other information:** Product is not biodegradable.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **Remark:** Due to mechanical actions of the product (e.g. agglutinations) damages may occur.

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· **Additional ecological information:**
· **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Observe local by-laws.
Already cured material can be disposed of with the domestic or commercial waste. Unconsumed material (fluid, paste-like) is to dispose of as hazardous waste.

· **Uncleaned packaging:**
· **Recommendation:**
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, ADN, IMDG, IATA** Void
· **14.2 UN proper shipping name**
· **ADR, ADN, IMDG, IATA** Void
· **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 Maritime transport in bulk according to IMO instruments** Not applicable.

· **Transport/Additional information:** Not dangerous according to the above specifications.
· **UN "Model Regulation":** Void

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **National regulations**

· **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

· **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
· **Details of international registration status:**
Listed on or in accordance with the following inventories:
NZIoC - New Zealand listed
TCSI - Taiwan listed
DSL- Canada listed
IECSC - China listed

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ENCS - Japan listed
PICCS - Philippines not listed
ECL - Korea listed
TSCA - USA listed
UK REACH - Europe listed
AICS - Australia listed

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

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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 Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· **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.
EUH204 Contains isocyanates. May produce an allergic reaction.

· **Department issuing SDS:** Tel.: 0049- (0)8684- 908- 2363
· **Contact:** Tel.: 0049- (0)8684- 908- 2363 (-4300)
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international 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.**