Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 21.09.2026 Version 6 (replaces version 5) Revision: 21.09.2026

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

This mixture contains nanoforms according to the REACH regulation.
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Product category** PC1 Adhesives, sealants
· **Application of the substance / the mixture** Preparation of adhesives
· **Uses advised against** Observe the information in the technical data sheet

· **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: msds@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**

Acute Tox. 4	H332 Harmful if inhaled.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
Resp. Sens. 1	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	H317 May cause an allergic skin reaction.
Carc. 2	H351 Suspected of causing cancer.
STOT SE 3	H335 May cause respiratory irritation.
STOT RE 2	H373 May cause damage to organs through prolonged or repeated exposure.

· **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,isomeres and homologues

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· **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**
P102 Keep out of reach of children.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / eye protection.
P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell.
P501 Dispose of contents/container in accordance with local regulations.
· **Additional information:**
EUH204 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 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
· **Determination of endocrine-disrupting properties**
This product does not contain components that are endocrine disruptors according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more.

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%

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CAS: 101-68-8 diphenylmethane-4,4'-di-isocyanante <10%
EINECS: 202-966-0
Index number: 615-005-00-9
Reg.nr.: 01-2119457014-47-xxxx
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: Eye Irrit. 2; H319: C ≥ 5 %
Skin Irrit. 2; H315: C ≥ 5 %
Resp. Sens. 1; H334: C ≥ 0.1 %
STOT SE 3; H335: C ≥ 5 %

CAS: 5873-54-1 diphenylmethane-2,4'-diisocyanate <10%
EINECS: 227-534-9
Index number: 615-005-00-9
Reg.nr.: 01-2119480143-45-xxxx
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: Eye Irrit. 2; H319: C ≥ 5 %
Skin Irrit. 2; H315: C ≥ 5 %
Resp. Sens. 1; H334: C ≥ 0.1 %
STOT SE 3; H335: C ≥ 5 %

CAS: 26447-40-5 Methylenediphenyl diisocyanate, mixed isomers <5%
EINECS: 247-714-0
Index number: 615-005-00-9
Reg.nr.: 01-2119457015-45-xxxx
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: Eye Irrit. 2; H319: C ≥ 5 %
Skin Irrit. 2; H315: C ≥ 5 %
Resp. Sens. 1; H334: C ≥ 0.1 %
STOT SE 3; H335: C ≥ 5 %

CAS: 2536-05-2 diphenylmethane-2,2'-diisocyanate <0.1%
EINECS: 219-799-4
Index number: 615-005-00-9
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: Eye Irrit. 2; H319: C ≥ 5 %
Skin Irrit. 2; H315: C ≥ 5 %
Resp. Sens. 1; H334: C ≥ 0.1 %
STOT SE 3; H335: C ≥ 5 %

· **Additional information**
For the wording of the listed hazard phrases refer to section 16.
Particulate raw materials with risk of inhalation are inextricably bound in the product and therefore does not trigger classification of the product for inhalation hazards. Due to the product's physical properties, particulate inhalation exposure is not possible.

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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· **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**
The product irritates the respiratory tract and is a potential trigger for skin and respiratory sensitisation. Treatment of acute irritation or bronchial constriction is primarily symptomatic. Depending on the extent of exposure and the symptoms, prolonged medical treatment may be necessary.

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**
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
· **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 section 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.
· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

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

101-68-8 diphenylmethane-4,4'-di-isocyanante
BOELV Short-term value: 0.012 (0.020)* mg/m³
Long-term value: 0.006 (0.010)* mg/m³
as -NCO *until 31.12.2028

5873-54-1 diphenylmethane-2,4'-diisocyanate
BOELV Short-term value: 0.012 (0.020)* mg/m³
Long-term value: 0.006 (0.010)* mg/m³
as -NCO *until 31.12.2028

26447-40-5 Methylenediphenyl diisocyanate, mixed isomers
BOELV Short-term value: 0.012 (0.020)* mg/m³
Long-term value: 0.006 (0.010)* mg/m³
as -NCO *until 31.12.2028

2536-05-2 diphenylmethane-2,2'-diisocyanate
BOELV Short-term value: 0.012 (0.020)* mg/m³
Long-term value: 0.006 (0.010)* mg/m³
as -NCO *until 31.12.2028
BOELV: EU 2024/869

· **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
BOELV Short-term value: 0.012 (0.020)* mg/m³
Long-term value: 0.006 (0.010)* mg/m³
as -NCO *until 31.12.2028
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 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.
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**	Liquid
· **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 (test methods for flash point not valid for pasty substances and highly viscous liquids)
· **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
· **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.
· **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
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:**
If isocyanate gets in contact with humidity, carbon dioxide is released. The carbon dioxide causes an overpressure in closed containers.

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· **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 (rabbit)

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

Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	9,400 mg/kg (rabbit)
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)

· **Primary irritant effect:**
· **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.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Suspected of causing cancer.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** May cause respiratory irritation.
· **STOT-repeated exposure** May cause damage to organs through prolonged or repeated exposure.
· **Aspiration hazard** Based on available data, the classification criteria are not met.
· **11.2 Information on other hazards**
· **Endocrine disrupting properties**
None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity** No further relevant information available
· **12.2 Persistence and degradability** No further relevant information available.
· **Other information:** Product is not biodegradable.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable
· **12.6 Endocrine disrupting properties**
This product does not contain components that are endocrine disruptors according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more.

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· **12.7 Other adverse effects**
· **Remark:** Due to mechanical actions of the product (e.g. agglutinations) damages may occur.
· **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**

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **REGULATION (EC) No 1907/2006 ANNEX XVII**
No. 56 for general public
No. 74 for commercial/industrial users
Conditions of restriction: 3, 56, 56a, 56b, 56c, 74

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· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **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.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not 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 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.
· **Version number of previous version:** 5
· **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

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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