

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 28.04.2016

Version 1

Revision: 28.04.2016

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

- **1.1 Product identifier**
- **Trade name: OTTOCOLL P 520 Comp. B**
- **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)8684/908-539
- **Further information obtainable from:**  
Tel.: 0049- (0)8684- 908- 641 ( -460 )  
E-Mail: alois.parzinger@otto-chemie.de
- **1.4 Emergency telephone number:** Tel.: 0049- (0)89- 192 40 (emergency telephone no.)

### 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

- 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 CLP regulation.
- **Hazard pictograms** GHS07, GHS08
- **Signal word** Danger

- **Hazard-determining components of labelling:**  
methylenediphenyl diisocyanate  
4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with 2,4'-  
diisocyanatodiphenylmethane and  $\alpha, \alpha', \alpha''$ -1,2,3-propanetriyltris[ $\omega$ -hydroxypoly [oxy(methyl-1,2-  
ethanediyl)]]
- **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.

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**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.  
 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.  
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P313 Get medical advice/attention.

**Additional information:**

Contains isocyanates. May produce an allergic reaction.

**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.

### SECTION 3: Composition/information on ingredients

**3.2 Chemical characterisation: Mixtures****Description:**

Prepolymer, based on diphenylmethandiisocyanat with monomeric and polymeric contents

**Dangerous components:**

- |                                      |   |        |
|--------------------------------------|---|--------|
| CAS: 72088-97-2                      | 1,2-propanediol polymer with 1-isocyanato-2-[(4-isocyanatophenyl) methyl] benzene, 1,1'- ethylenebis[4-isocyanatobenzene], ethyloxirane and oxirane       | < 25%  |
|                                      | ⚠ 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                |        |
| CAS: 9016-87-9                       | diphenylmethanediisocyanate, isomeres and homologues  | < 25%  |
|                                      | ⚠ 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 |        |
| CAS: 101-68-8<br>EINECS: 202-966-0   | diphenylmethane-4,4'-di-isocyanate  | < 10%  |
|                                      | ⚠ 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 |        |
| CAS: 26447-40-5<br>EINECS: 247-714-0 | methylenediphenyl diisocyanate  | < 10%  |
|                                      | ⚠ 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 |        |
| EC number: 926-141-6                 | Isoparaffins  | < 2.5% |
|                                      | ⚠ Asp. Tox. 1, H304; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 3, H412  |        |
| CAS: 4083-64-1<br>EINECS: 223-810-8  | 4-isocyanatosulphonyltoluene  | < 1%   |
|                                      | ⚠ Resp. Sens. 1, H334; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335   |        |

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- **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.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents**

CO<sub>2</sub>, 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 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.

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Protect from heat and direct sunlight.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
  - **8.1 Control parameters**
  - **Ingredients with limit values that require monitoring at the workplace:**
- 101-68-8 diphenylmethane-4,4'-di-isocyanate**
- WEL Short-term value: 0.07 mg/m<sup>3</sup>  
 Long-term value: 0.02 mg/m<sup>3</sup>  
 Sen; as -NCO
- **Additional information:** The lists valid during the making were used as basis.
  - **8.2 Exposure controls**
  - **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.
  - **Protection of hands:** 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: > 15 min
  - **Eye protection:** Safety glasses
  - **Body protection:** Protective work clothing.

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
  - Form:** pasty
  - Colour:** According to product specification
- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **Change in condition**
  - Melting point/Melting range:** undetermined
  - Boiling point/Boiling range:** undetermined
- **Flash point:** undetermined
- **Self-igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density at 20 °C:** 1.57 g/cm<sup>3</sup>
- **Solubility in / Miscibility with Water:** Hydrolized

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### 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
- **10.5 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 toxicological effects**
  - **Acute toxicity**  
Harmful if inhaled.
  - **LD/LC50 values relevant for classification:**
- 
- 9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**
- Oral LD50 > 10000 mg/kg (rat)  
Dermal LD50 > 9400 mg/kg (rab)  
Inhalative LC50/4 h 0.49 mg/l (rat)
- 101-68-8 diphenylmethane-4,4'-di-isocyanate**
- Oral LD50 > 10000 mg/kg (rat)  
Dermal LD50 > 9400 mg/kg (rab)  
Inhalative LC50/4 h 0.49 mg/l (rat)
- 26447-40-5 methylenediphenyl diisocyanate**
- Oral LD50 > 10000 mg/kg (rat)  
Dermal LD50 > 9400 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.
  - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
  - **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.

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· **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.2 Persistence and degradability**
- **Other information:** Product is not biodegradable.
- **Ecotoxicological effects:**
- **Remark:** Due to mechanical actions of the product (e.g. agglutinations) damages may occur.
- **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.

### 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**
- **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 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
- **Transport/Additional information:** Not dangerous according to the above specifications.
- **UN "Model Regulation":** Void

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### SECTION 15: Regulatory information

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

EINECS - Europe	listed
AICS - Australia	listed
DSL/NDSL - Canada	listed
IECSC - China	listed
ENCS - Japan	listed
NZIoC - New Zealand	listed
PICCS - Philippines	not listed
ECL/KECI - Korea	listed
TSCA - USA	listed
NECI - Taiwan	listed
- **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.

- **Relevant phrases**  
H304 May be fatal if swallowed and enters airways.  
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.  
H336 May cause drowsiness or dizziness.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H412 Harmful to aquatic life with long lasting effects.
- **Department issuing MSDS:** Tel.: 0049- (0)8684- 908- 641
- **Contact:** Tel.: 0049- (0)8684- 908- 641 ( -460 )
- **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 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, 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  
Asp. Tox. 1: Aspiration hazard, Hazard Category 1

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Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3  
· \* **Data compared to the previous version altered.**

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