

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.07.2018

Version 2

Revision: 30.07.2018

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

- **1.1 Product identifier**
- **Trade name:** **OTTOPUR Turbo A-Komp.**
- **Application of the substance / the mixture** Assembly foam
- **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**



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin 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** GHS05, GHS07
- **Signal word** Danger
- **Hazard-determining components of labelling:**
Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid
1,3-Isobenzofurandione, polymer with 2,2'-oxybis[ethanol]
Polyetherpolyol, bromiert
2-[[2-(dimethylamino)ethyl]methylamino]ethanol
- **Hazard statements**
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
- **Precautionary statements**
P102 Keep out of reach of children.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.

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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.*

- **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 characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.
- **Dangerous components:**

EC number: 911-815-4	Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid	30-40%
Reg.nr.: 01-2119486772-26-XXXX	⚠ Acute Tox. 4, H302	
EC number: 926-564-6	Polyetherpolyol, bromiert	10-20%
Reg.nr.: 01-2119971810-36-xxxx	⚠ Acute Tox. 4, H302	
CAS: 32472-85-8	1,3-Isobenzofurandione, polymer with 2,2'-oxybis[ethanol]	10-20%
EC number: 608-744-3	⚠ Eye Dam. 1, H318	
CAS: 13674-84-5	tris(2-chlorisopropyl)-phosphate	5-10%
EINECS: 237-158-7	⚠ Acute Tox. 4, H302	
Reg.nr.: 01-2119447716-31-XXXX		
CAS: 2212-32-0	2-[[2-(dimethylamino)ethyl]methylamino]ethanol	<2%
EINECS: 218-658-4	⚠ Skin Corr. 1C, H314; Eye Dam. 1, H318	
CAS: 111-46-6	2,2'-oxybisethanol	<2%
EINECS: 203-872-2	⚠ Acute Tox. 4, H302	

- **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**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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- **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.
- **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Keep away from ignition sources
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Allow to solidify. Pick up mechanically.
- **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:** No special measures required.
- **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

- **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:**

111-46-6 2,2'-oxybisethanol (≥0.1-<2.5%)
WEL Long-term value: 101 mg/m³, 23 ppm
- **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.

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- **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
Filter A/P2.
- **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: > 480 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.*
- **pH-value:** *Not determined.*
- **Change in condition**
 - Melting point/freezing point: *undetermined*
 - Initial boiling point and boiling range: *Not applicable, as aerosol*
- **Flash point:** *>101 °C*
- **Auto-ignition temperature:** *Product is not selfigniting.*
- **Explosive properties:** *Product is not explosive. However, formation of explosive air/vapour mixtures are possible.*
- **Explosion limits:**
 - Lower: *not applicable*
 - Upper: *not applicable*
- **Oxidising properties** *Not determined.*
- **Vapour pressure:** *Not determined.*
- **Density:** *see technical datasheet*
- **Vapour density** *Not applicable.*
- **Evaporation rate** *Not determined.*
- **Solubility in / Miscibility with**
 - Water: *Not miscible or difficult to mix*
- **Partition coefficient: n-octanol/water:** *Not determined.*
- **Viscosity:** *Not determined.*

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**
Danger of receptacles bursting because of high vapour pressure when heated
- **10.5 Incompatible materials:** Strong oxidizing agents, alkalis, amines, strong acids
- **10.6 Hazardous decomposition products:**
Hydrogen chloride (HCl)
Bromine compounds

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity**
Harmful if swallowed.
 - **LD/LC50 values relevant for classification:**
-
- Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid**
Oral LD50 632 mg/kg (rat)
- Polyetherpolyol, bromiert**
Oral LD50 732 mg/kg (rat)
Dermal LD50 >2,000 mg/kg (rab)
- 32472-85-8 1,3-Isobenzofurandione, polymer with 2,2'-oxybis[ethanol]**
Oral LD50 >5,000 mg/kg (rat)
Dermal LD50 >2,000 mg/kg (rat)
- 13674-84-5 tris(2-chlorisopropyl)-phosphate**
Dermal LD50 >2,000 mg/kg (rat)
- 2212-32-0 2-[[2-(dimethylamino)ethyl]methylamino]ethanol**
Oral LD50 >2,000 mg/kg (rat)
- 111-46-6 2,2'-oxybisethanol**
Oral LD50 12,565 mg/kg (rat)
Dermal LD50 11,890 mg/kg (rbt)
- **Primary irritant effect:**
 - **Skin corrosion/irritation**
Causes skin irritation.
 - **Serious eye damage/irritation**
Causes serious eye damage.
 - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
 - **Carcinogenicity** Based on available data, the classification criteria are not met.
 - **Reproductive toxicity** Based on available data, the classification criteria are not met.
 - **STOT-single exposure** Based on available data, the classification criteria are not met.
 - **STOT-repeated exposure** Based on available data, the classification criteria are not met.
 - **Aspiration hazard** Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

- **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:** Not applicable.
- **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

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.

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- **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
 - DSL/NDSL - Canada not listed
 - NZIoC - New Zealand not listed
 - NECI - Taiwan not listed
 - TSCA - USA not listed
 - AICS - Australia not listed
 - ECL/KECI - Korea not listed
 - IECSC - China not listed
 - ENCS - Japan not listed
 - PICCS - Philippines not 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**
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
- **Department issuing SDS:** 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 – Category 4
Skin Corr. 1C: Skin corrosion/irritation – Category 1C
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- *** Data compared to the previous version altered.**

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Printing date 20.06.2018

Version 1

Revision: 20.06.2018

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

- **1.1 Product identifier**
- **Trade name:** **OTTOPUR Turbo Komp. B**
- **Application of the substance / the mixture** Assembly foam
- **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:**
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/protective clothing/eye protection/face 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.

- **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:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 9016-87-9 Reg.nr.: EG: Polymer	diphenylmethanediisocyanate, isomeres and homologues ⚠ 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	40-50%
CAS: 101-68-8 EINECS: 202-966-0 Reg.nr.: 01-2119457014-47-xxxx	diphenylmethane-4,4'-di-isocyanate ⚠ 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	30-40%
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	5-10%
CAS: 2536-05-2 EINECS: 219-799-4	diphenylmethane-2,2'-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	<0.5%

- **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.

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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**

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.

Nitrogen oxides (NO_x)

Hydrogen cyanide (HCN)

- **5.3 Advice for firefighters**

- **Protective equipment:**

Mount respiratory protective device.

Do not inhale explosion gases or combustion gases.

- **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Keep away from ignition sources

- **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.

Allow to solidify. Pick up mechanically.

- **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:**

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues (≥10-<50%)

WEL Short-term value: 0.07 mg/m³

Long-term value: 0.02 mg/m³

Sen; as -NCO

101-68-8 diphenylmethane-4,4'-di-isocyanate (≥10-<50%)

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 (≥10-<25%)

WEL Short-term value: 0.07 mg/m³

Long-term value: 0.02 mg/m³

Sen; as -NCO

2536-05-2 diphenylmethane-2,2'-diisocyanate (≥0.1-<1%)

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**

· **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: > 480 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

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- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
- **Melting point/freezing point:** undetermined
- **Initial boiling point and boiling range:** 208 °C
- **Flash point:** 212 °C
- **Ignition temperature:** 400 °C
- **Auto-ignition temperature:** Product is not selfigniting.
- **Explosive properties:** Product does not present an explosion hazard.
- **Explosion limits:**
- **Lower:** not applicable
- **Upper:** not applicable
- **Oxidising properties** Not determined.
- **Vapour pressure:** Not determined.
- **Density:** see technical datasheet
- **Vapour density** Not applicable.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix
- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:** Not determined.

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**
Danger of receptacles bursting because of high vapour pressure when heated
- **10.5 Incompatible materials:** Strong oxidizing agents, alkalis, amines, strong acids
- **10.6 Hazardous decomposition products:** Isocyanate

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

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

Oral LD50 >10,000 mg/kg (rat)

Dermal LD50 >9,400 mg/kg (rbt)

Inhalative LC50/4 h 0.49 mg/l (rat)

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)

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

SECTION 12: Ecological information

- **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.

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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:** Not applicable.
- **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

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.
- **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 not listed
 - DSL/NDSL - Canada not listed
 - ECL/KECI - Korea not listed
 - IECSC - China not listed
 - ENCS - Japan not listed
 - NZIoC - New Zealand not listed
 - PICCS - Philippines not listed
 - NECI - Taiwan not listed
 - TSCA - USA not 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**
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.

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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.

· **Department issuing SDS:** 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 – 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.**

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