

# Safety data sheet

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

Printing date 12.01.2015

Revision: 12.01.2015

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

- **1.1 Product identifier**
- **Trade name:** OTTOPUR OP 930
- **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**



GHS02 flame

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



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

|               |      |                                      |
|---------------|------|--------------------------------------|
| 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

R40: Limited evidence of a carcinogenic effect.



Xn; Sensitising

R42/43: May cause sensitisation by inhalation and skin contact.



Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

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F+; Extremely flammable

R12: Extremely flammable.

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by 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** GHS02, GHS07, GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

diphenylmethanediisocyanate, isomeres and homologues

· **Hazard statements**

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

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.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Pressurized container: Do not pierce or burn, even after use.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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

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

P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

· **Additional information:**

Contains isocyanates. May produce an allergic reaction.

Buildup of explosive mixtures possible without sufficient ventilation.

· **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.

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**Dangerous components:**

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| CAS: 13674-84-5   | tris(2-chlorisopropyl)-phosphate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | < 25% |
| EINECS: 237-158-7 |  Xn R22<br>R52/53<br>Aquatic Chronic 3, H412                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |
| CAS: 9016-87-9    | diphenylmethanediisocyanate, isomeres and homologues                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | < 25% |
|                   |  Xn R20-40-48/20;  Xn R42/43;  Xi R36/37/38<br>Carc. Cat. 3<br> 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: 75-28-5      | isobutane                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | < 10% |
| EINECS: 200-857-2 |  F+ R12<br> Flam. Gas 1, H220; Press. Gas, H280                                                                                                                                                                                                                                                                                                                                                                                                                             |       |
| CAS: 115-10-6     | dimethyl ether                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | < 10% |
| EINECS: 204-065-8 |  F+ R12<br> Flam. Gas 1, H220; Press. Gas, H280                                                                                                                                                                                                                                                                                                                                                                                                                             |       |
| CAS: 74-98-6      | propane                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | < 10% |
| EINECS: 200-827-9 |  F+ R12<br> Flam. Gas 1, H220; Press. Gas, H280                                                                                                                                                                                                                                                                                                                                                                                                                             |       |

• **Additional information** 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.

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.

##### • Additional information

Cool endangered receptacles with water spray.

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### 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:**  
 Do not spray onto a naked flame or any incandescent material.  
 Keep ignition sources away - Do not smoke.  
 Traces of flammable substances may collect in the steam chamber of enclosed systems. Keep clear of ignition sources.  
 Fumes can combine with air to form an explosive mixture.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**  
 Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**  
 Do not seal receptacle gas tight.  
 Protect from heat and direct sunlight.  
 Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

### 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**  
 MEL Short-term value: 0.07 mg/m<sup>3</sup>  
 Long-term value: 0.02 mg/m<sup>3</sup>  
 Sen; as -NCO
- 106-97-8 butane**  
 OES Short-term value: 1810 mg/m<sup>3</sup>, 750 ppm  
 Long-term value: 1450 mg/m<sup>3</sup>, 600 ppm
- 115-10-6 dimethyl ether**  
 OES Short-term value: 958 mg/m<sup>3</sup>, 500 ppm  
 Long-term value: 766 mg/m<sup>3</sup>, 400 ppm  
 IOELV
- **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.

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- 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. 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.  
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.  
Butyl rubber, BR  
Fluorocarbon rubber (Viton)  
Nitrile rubber, NBR
  - **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **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:** Aerosol
  - Colour:** Yellowish
- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **Change in condition**
  - Melting point/Melting range:** undetermined
  - Boiling point/Boiling range:** Not applicable, as aerosol
- **Flash point:** Not applicable
- **Ignition temperature:** > 230 °C
- **Self-igniting:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- **Explosion limits:**
  - Lower:** 1.5 Vol %
  - Upper:** 26.2 Vol %
- **Density at 20 °C:** 1 g/cm<sup>3</sup>
- **Solubility in / Miscibility with**
  - Water:** Hydrolized

### 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.  
Avoid strong heating.

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- **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)  
Hydrogen cyanide (prussic acid)  
see item 5.3

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values relevant for classification:**  

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**9016-87-9 diphenylmethanediisocyanate, isomers and homologues**  
Oral LD50 > 10000 mg/kg (rat)  
Dermal LD50 > 9400 mg/kg (rab)  
Inhalative LC50/4 h 0.49 mg/l (rat)
- **Primary irritant effect:**
- **on the skin:** Irritating effects to skin and mucous membranes possible
- **on the eye:** Irritating effect possible
- **Sensitisation:**  
Sensitisation possible through inhalation.  
Sensitisation possible through skin contact.  
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.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
Carc. 2

### SECTION 12: Ecological information

- **Additional ecological information:**
- **General notes:**  
Generally not 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.

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### SECTION 14: Transport information

- 14.1 UN-Number UN1950
- ADR, IMDG, IATA
- 14.2 UN proper shipping name
- ADR 1950 AEROSOLS
- IMDG AEROSOLS
- IATA AEROSOLS, flammable
- 14.3 Transport hazard class(es)
- ADR



- Class 2 5F Gases.
- Label 2.1

- IMDG, IATA



- Class 2.1
- Label 2.1
- 14.4 Packing group
- ADR, IMDG, IATA Void
- 14.5 Environmental hazards:
- Marine pollutant: No
- 14.6 Special precautions for user Warning: Gases.
- Danger code (Kemler): -
- EMS Number: F-D,S-U
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

- Transport/Additional information:

- ADR
- Limited quantities (LQ) 1L
- Excepted quantities (EQ) Code: E0  
Not permitted as Excepted Quantity
- Transport category 2
- Tunnel restriction code D

- IMDG
- Limited quantities (LQ) 1L
- Excepted quantities (EQ) Code: E0  
Not permitted as Excepted Quantity
- UN "Model Regulation": UN1950, AEROSOLS, 2.1

### 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.

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Employment restrictions concerning pregnant and lactating women must be observed.

· **Waterhazard class:** Generally not 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   | not listed |
| IECSC - China       | not listed |
| ENCS - Japan        | not listed |
| NZIoC - New Zealand | not listed |
| PICCS - Philippines | not listed |
| ECL/KECI - Korea    | not listed |
| TSCA - USA          | listed     |
| NECI - Taiwan       | 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**

|           |                                                                                               |
|-----------|-----------------------------------------------------------------------------------------------|
| H220      | Extremely flammable gas.                                                                      |
| H280      | Contains gas under pressure; may explode if heated.                                           |
| 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.                            |
| H412      | Harmful to aquatic life with long lasting effects.                                            |
| R12       | Extremely flammable.                                                                          |
| R20       | Harmful by inhalation.                                                                        |
| R22       | Harmful if swallowed.                                                                         |
| 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.         |
| R52/53    | Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

· **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

Flam. Gas 1: Flammable gases, Hazard Category 1

Flam. Aerosol 1: Flammable aerosols, Hazard Category 1

Press. Gas: Gases under pressure: Compressed gas

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

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

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