

# SAFETY DATA SHEET



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

### 1.1. Product identifier

Product name **BULLET ROOF MONO SINGLE PLY PRIMER**

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use **Polyurethane coating**

| Identified Uses                 | Industrial | Professional  | Consumer |
|---------------------------------|------------|---|----------|
| Brush/roller/trowel application | -          | SU: 19.<br>ERC: 10a, 11a, 8a, 8c,<br>8d, 8f.<br>PROC: 10, 15, 19, 9.<br>PC: 9a.<br>LCS: PW. | -        |

### 1.3. Details of the supplier of the safety data sheet

Name **BULLET BUILDING PRODUCTS LTD**  
Full address **Barbot Hall Industrial Estate, Mangham Road Rotherham. S61 4RJ**  
District and Country

**Tel.01274 752643**

e-mail address of the competent person  
responsible for the Safety Data Sheet

**sales@bulletbp.co.uk**

### 1.4. Emergency telephone number

For urgent inquiries refer to

**United Kingdom**  
**999/112 emergency**  
**111 non-emergency medical number**  
**NHS 111 (England)**  
**NHS 24 (Scotland)**  
**NHS Direct (Wales)**

**Ireland**  
**National Poisons Information Centre, Beaumont Hospital, PO Box 1297, Beaumont**  
**Road, Dublin 9**  
**018092166**  
**018092566**

## SECTION 2. Hazards identification

### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

|  |      |  |
|--|------|--|
| Carcinogenicity, category 2                                    | H351 | Suspected of causing cancer.                                       |
| Acute toxicity, category 4                                     | H332 | Harmful if inhaled.  |
| Specific target organ toxicity - repeated exposure, category 2 | H373 | May cause damage to organs through prolonged or repeated exposure. |
| Eye irritation, category 2                                     | H319 | Causes serious eye irritation.                                     |
| Skin irritation, category 2                                    | H315 | Causes skin irritation.  |
| Specific target organ toxicity - single exposure, category 3   | H335 | May cause respiratory irritation.                                  |

## SECTION 2. Hazards identification ... / >>

|                                       |      |  |
|---------------------------------------|------|--|
| Respiratory sensitization, category 1 | H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin sensitization, category 1        | H317 | May cause an allergic skin reaction.                                       |

### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: Danger

Hazard statements:

|               |  |
|---------------|--|
| <b>H351</b>   | Suspected of causing cancer.   |
| <b>H332</b>   | Harmful if inhaled.  |
| <b>H373</b>   | May cause damage to organs through prolonged or repeated exposure.         |
| <b>H319</b>   | Causes serious eye irritation.   |
| <b>H315</b>   | Causes skin irritation.  |
| <b>H335</b>   | May cause respiratory irritation.  |
| <b>H334</b>   | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| <b>H317</b>   | May cause an allergic skin reaction.                                       |
| <b>EUH204</b> | Contains isocyanates. May produce an allergic reaction.                    |

Precautionary statements:

|                  |   |
|------------------|---|
| <b>P261</b>      | Avoid breathing dust / fume / gas / mist / vapours / spray.                     |
| <b>P280</b>      | Wear protective gloves/ protective clothing / eye protection / face protection. |
| <b>P342+P311</b> | If experiencing respiratory symptoms: call a POISON CENTER.                     |
| <b>P304+P340</b> | IF INHALED: remove person to fresh air and keep comfortable for breathing.      |
| <b>P201</b>      | Obtain special instructions before use.   |
| <b>P308+P313</b> | IF exposed or concerned: Get medical advice / attention.                        |

**Contains:** REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE

**As from 24 August 2023 adequate training is required before industrial or professional use.**

VOC (Directive 2004/42/EC) :

Binding primers.

VOC given in g/litre of product in a ready-to-use condition : 310,07

Limit value: 750,00

### 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

## SECTION 3. Composition/information on ingredients

### 3.1. Substances

Information not relevant

## SECTION 3. Composition/information on ingredients ... / >>

### 3.2. Mixtures

Contains:

| Identification  | x = Conc. %      | Classification (EC) 1272/2008 (CLP)   |
|---|------------------|---|
| <b>REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE</b> |                  |   |
| INDEX   | 62 ≤ x < 66      | Carc. 2 H351, Acute Tox. 4 H332, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317<br>Resp. Sens. 1 H334: ≥ 0,1%<br>STA Inhalation mists/powders: 1,5 mg/l |
| EC  | 905-806-4        |   |
| CAS   |                  |   |
| REACH Reg.  | 01-2119457015-45 |   |
| <b>PROPYLENE CARBONATE</b>  |                  |   |
| INDEX   | 607-194-00-1     | 25,5 ≤ x < 27   |
| EC  | 203-572-1        | Eye Irrit. 2 H319   |
| CAS   | 108-32-7         |   |
| REACH Reg.  | 01-2119537232-48 |   |
| <b>TOSYL ISOCYANATE</b>   |                  |   |
| INDEX   | 615-012-00-7     | 0,35 ≤ x < 0,4  |
| EC  | 223-810-8        | Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, EUH014<br>Skin Irrit. 2 H315: ≥ 5%, Eye Irrit. 2 H319: ≥ 5%, STOT SE 3 H335: ≥ 5%  |
| CAS   | 4083-64-1        |   |
| REACH Reg.  | 01-2119980050-47 |   |
| <b>CHLOROBENZENE</b>  |                  |   |
| INDEX   | 602-033-00-1     | 0 ≤ x < 0,05  |
| EC  | 203-628-5        | Flam. Liq. 3 H226, Acute Tox. 4 H332, Skin Irrit. 2 H315, Aquatic Chronic 2 H411<br>LC50 Inhalation vapours: 15,5 mg/l/4h   |
| CAS   | 108-90-7         |   |
| REACH Reg.  | 01-2119432722-45 |   |

The full wording of hazard (H) phrases is given in section 16 of the sheet.

## SECTION 4. First aid measures

### 4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

### 4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

### 4.3. Indication of any immediate medical attention and special treatment needed

Information not available

## SECTION 5. Firefighting measures

### 5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

### 5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

### 5.3. Advice for firefighters

## GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## SECTION 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

### 6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

### 6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

## SECTION 7. Handling and storage

### 7.1. Precautions for safe handling

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

### 7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

### 7.3. Specific end use(s)

Information not available

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters

Regulatory References:

|     |             |   |
|-----|-------------|---|
| DEU | Deutschland | Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56   |
| ESP | España      | Límites de exposición profesional para agentes químicos en España 2021  |
| FRA | France      | Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS  |
| FIN | Suomi       | HTP-VÄRDEN 2020. Koncentrationer som befunnits skadliga. SOCIAL - OCH HÄLSOVÅRDSMINISTERIETS PUBLIKATIONER 2020:25  |
| GRC | Ελλάδα      | Π.Δ. 26/2020 (ΦΕΚ 50/Α` 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ "σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιγόνους παράγοντες κατά την εργασία"» |
| HRV | Hrvatska    | Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnimkemičkim  |

**SECTION 8. Exposure controls/personal protection ... / >>**

|     |                |  |
|-----|----------------|--|
| ITA | Italia         | na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021) Decreto Legislativo 9 Aprile 2008, n.81   |
| LTU | Lietuva        | Jsakymas dėl lietuovos higienos normos hn 23:2011 „cheminių medžiagų profesinio poveikio ribiniai dydžiai. Matavimo ir poveikio vertinimo bendrieji reikalavimai“ patvirtinimo   |
| NLD | Nederland      | Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit  |
| PRT | Portugal       | Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos    |
| POL | Polska         | Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy  |
| ROU | România        | Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006  |
| SVK | Slovensko      | NARIADENIE VLÁDY Slovenskej republiky z 12. augusta 2020, ktorým sa mení a dopĺňa nariadenie vlády Slovenskej republiky č. 356/2006 Z. z. o ochrane zdravia zamestnancov pred rizikami súvisiacimi s expozíciou karcinogénnym a mutagénnym faktorom pri práci v znení neskorších predpisov |
| SVN | Slovenija      | Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)  |
| GBR | United Kingdom | EH40/2005 Workplace exposure limits (Fourth Edition 2020)  |
| EU  | OEL EU         | Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC. |
|     | TLV-ACGIH      | ACGIH 2022   |

**REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE**

| Threshold Limit Value                          |                      |          |         |            |                    |                        |               |          |
|--|----------------------|----------|---------|------------|--------------------|------------------------|---------------|----------|
| Type   | Country              | TWA/8h   |         | STEL/15min |                    | Remarks / Observations |               |          |
|  |                      | mg/m3    | ppm     | mg/m3      | ppm                |                        |               |          |
| TLV-ACGIH                                      |                      |          | 0,005   |            |                    |                        |               |          |
| Predicted no-effect concentration - PNEC       |                      |          |         |            |                    |                        |               |          |
| Normal value in fresh water                    |                      |          |         |            |                    | 1                      | mg/l          |          |
| Normal value in marine water                   |                      |          |         |            |                    | 0,1                    | mg/l          |          |
| Normal value of STP microorganisms             |                      |          |         |            |                    | 1                      | mg/l          |          |
| Normal value for the terrestrial compartment   |                      |          |         |            |                    | 1                      | mg/kg         |          |
| Health - Derived no-effect level - DNEL / DMEL |                      |          |         |            |                    |                        |               |          |
| Route of exposure                              | Effects on consumers |          |         |            | Effects on workers |                        |               |          |
|  | Acute                | Acute    | Chronic | Chronic    | Acute              | Acute                  | Chronic       | Chronic  |
|  | local                | systemic | local   | systemic   | local              | systemic               | local         | systemic |
| Inhalation                                     |                      |          |         |            | 0,1<br>mg/m3       | NPI                    | 0,05<br>mg/m3 | NPI      |
| Skin   |                      |          |         |            |                    | NPI                    |               | NPI      |

**PROPYLENE CARBONATE**

| Threshold Limit Value                          |                      |          |         |            |                    |                        |                  |                     |
|--|----------------------|----------|---------|------------|--------------------|------------------------|------------------|---------------------|
| Type   | Country              | TWA/8h   |         | STEL/15min |                    | Remarks / Observations |                  |                     |
|  |                      | mg/m3    | ppm     | mg/m3      | ppm                |                        |                  |                     |
| AGW  | DEU                  | 8,5      | 2       | 8,5        | 2                  | INHAL                  |                  |                     |
| MAK  | DEU                  | 8,5      | 2       | 8,5        | 2                  | INHAL                  |                  |                     |
| RD   | LTU                  | 2        |         |            |                    |                        |                  |                     |
| Predicted no-effect concentration - PNEC       |                      |          |         |            |                    |                        |                  |                     |
| Normal value in fresh water                    |                      |          |         |            |                    | 0,9                    | mg/l             |                     |
| Normal value in marine water                   |                      |          |         |            |                    | 0,09                   | mg/l             |                     |
| Normal value of STP microorganisms             |                      |          |         |            |                    | 7400                   | mg/l             |                     |
| Normal value for the terrestrial compartment   |                      |          |         |            |                    | 0,81                   | mg/kg            |                     |
| Health - Derived no-effect level - DNEL / DMEL |                      |          |         |            |                    |                        |                  |                     |
| Route of exposure                              | Effects on consumers |          |         |            | Effects on workers |                        |                  |                     |
|  | Acute                | Acute    | Chronic | Chronic    | Acute              | Acute                  | Chronic          | Chronic             |
|  | local                | systemic | local   | systemic   | local              | systemic               | local            | systemic            |
| Inhalation                                     |                      |          |         |            | NPI                | NPI                    | 20<br>mg/m3      | 70,53<br>mg/m3      |
| Skin   |                      |          |         |            |                    | NPI                    | 10<br>mg/kg bw/d | 20<br>mg/kg<br>bw/d |

**SECTION 8. Exposure controls/personal protection ... / >>**

| TOSYL ISOCYANATE      |         |                   |     |                   |     |                        |
|-----------------------|---------|-------------------|-----|-------------------|-----|------------------------|
| Threshold Limit Value |         |                   |     |                   |     |                        |
| Type                  | Country | TWA/8h            |     | STEL/15min        |     | Remarks / Observations |
|                       |         | mg/m <sup>3</sup> | ppm | mg/m <sup>3</sup> | ppm |                        |
| HTP                   | FIN     |                   |     | 0,035             |     | Som NCO                |
| GVI/KGVI              | HRV     | 0,02              |     | 0,07              |     | Kao NCO                |
| WEL                   | GBR     | 0,02              |     | 0,07              |     | AS NCO                 |

| CHLOROBENZENE         |         |                   |     |                   |     |                        |
|-----------------------|---------|-------------------|-----|-------------------|-----|------------------------|
| Threshold Limit Value |         |                   |     |                   |     |                        |
| Type                  | Country | TWA/8h            |     | STEL/15min        |     | Remarks / Observations |
|                       |         | mg/m <sup>3</sup> | ppm | mg/m <sup>3</sup> | ppm |                        |
| AGW                   | DEU     | 23                | 5   | 46                | 10  |                        |
| MAK                   | DEU     | 23                | 5   | 46                | 10  |                        |
| VLA                   | ESP     | 23                | 5   | 70                | 15  |                        |
| VLEP                  | FRA     | 23                | 5   | 70                | 15  |                        |
| HTP                   | FIN     | 23                | 5   | 70                | 15  | SKIN                   |
| TLV                   | GRC     | 23                | 5   | 70                | 15  |                        |
| GVI/KGVI              | HRV     | 23                | 5   | 70                | 15  | SKIN                   |
| VLEP                  | ITA     | 23                | 5   | 70                | 15  |                        |
| RD                    | LTU     | 23                | 5   | 70                | 15  |                        |
| TGG                   | NLD     | 23                |     | 70                |     |                        |
| VLE                   | PRT     | 23                | 5   | 70                | 15  |                        |
| NDS/NDSch             | POL     | 23                |     | 70                |     |                        |
| TLV                   | ROU     | 23                | 5   | 70                | 15  |                        |
| NPEL                  | SVK     | 23                | 5   | 70                | 15  |                        |
| MV                    | SVN     | 23                | 5   | 69                | 15  |                        |
| WEL                   | GBR     | 4,7               | 1   | 14                | 3   | SKIN                   |
| OEL                   | EU      | 23                | 5   | 70                | 15  |                        |
| TLV-ACGIH             |         | 46                | 10  |                   |     |                        |

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

**8.2. Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

**HAND PROTECTION**

Protect hands with category III work gloves.

The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

**SKIN PROTECTION**

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

**EYE PROTECTION**

Wear airtight protective goggles (see standard EN 166).

**RESPIRATORY PROTECTION**

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure

## SECTION 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| Properties                             | Value                  | Information  |
|--|------------------------|--|
| Appearance                             | liquid                 |  |
| Colour                                 | amber                  |  |
| Odour                                  | characteristic         |  |
| Melting point / freezing point         | not available          |  |
| Initial boiling point                  | not available          |  |
| Flammability                           | not applicable         |  |
| Lower explosive limit                  | not available          |  |
| Upper explosive limit                  | not available          |  |
| Flash point                            | 110 °C                 | Method: Closed cup   |
| Auto-ignition temperature              | not available          |  |
| Decomposition temperature              | not available          |  |
| pH                                     | not applicable         | Reason for missing data: substance/mixture is non-soluble (in water) |
| Kinematic viscosity                    | not available          |  |
| Dynamic viscosity                      | 400 mPa*s              | Temperature: 20 °C   |
| Solubility                             | insoluble in water     |  |
| Partition coefficient: n-octanol/water | not applicable         |  |
| Vapour pressure                        | not available          |  |
| Density and/or relative density        | 1,16 g/cm <sup>3</sup> | Temperature: 20 °C   |
| Relative vapour density                | not available          |  |
| Particle characteristics               | not applicable         |  |

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

Information not available

#### 9.2.2. Other safety characteristics

|                              |                   |         |
|------------------------------|-------------------|---------|
| Total solids (250°C / 482°F) | 62,47 %           |         |
| VOC (Directive 2004/42/EC) : | 26,73 % - 310,07  | g/litre |
| VOC (volatile carbon)        | < 0.01 % - < 0.01 | g/litre |
| Explosive properties         | not expected      |         |
| Oxidising properties         | not expected      |         |

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE

On contact with: water. Forms: carbon dioxide.

In the air absorbs moisture.

Reacts with: water, alcohols, amines.

### 10.2. Chemical stability

The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE

Reacts with: water, alcohols, amines.

### 10.4. Conditions to avoid

## SECTION 10. Stability and reactivity ... / >>

None in particular. However the usual precautions used for chemical products should be respected.

REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE

Avoid exposure to: moisture.

### 10.5. Incompatible materials

REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE

Avoid contact with: water,acids,alcohols,amines,bases.

### 10.6. Hazardous decomposition products

REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE

In decomposition develops: nitric oxide,carbon oxides.

## SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

|  |   |
|--|---|
| ATE (Inhalation - mists / powders) of the mixture: | 2,3 mg/l                                  |
| ATE (Oral) of the mixture:                         | Not classified (no significant component) |
| ATE (Dermal) of the mixture:                       | Not classified (no significant component) |

|  |   |
|--|---|
| REACTION MASS OF 4,4'-METHYLENEDIPHENYL DIISOCYANATE AND O-(P-ISOCYANATOBENZYL)PHENYL ISOCYANATE |   |
| LD50 (Dermal):   | > 9400 mg/kg OECD Guideline 402, Rabbit<br>> 2000 mg/kg 84/449/EEC (Gazette of the European Community, No. L 251, Rat - Wistar) |
| LD50 (Oral):   | 0,368 mg/l/4h OECD Guideline 403, Rat - Wistar  |
| LC50 (Inhalation mists/powders):   | 1,5 mg/l estimate from table 3.1.2 of Annex I of the CLP  |
| STA (Inhalation mists/powders):  | (figure used for calculation of the acute toxicity estimate of the mixture)   |

|                     |   |
|---------------------|---|
| PROPYLENE CARBONATE |   |
| LD50 (Dermal):      | > 2000 mg/kg OECD Guideline 402, Rabbit - New Zealand White |
| LD50 (Oral):        | > 5000 mg/kg OECD Guideline 401, Rat - Sprague-Dawley       |

|                            |                  |
|----------------------------|------------------|
| CHLOROBENZENE              |                  |
| LD50 (Oral):               | > 2000 mg/kg Rat |
| LC50 (Inhalation vapours): | 15,5 mg/l/4h Rat |

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION



## SECTION 11. Toxicological information ... / >>

Sensitising for the skin  
Sensitising for the respiratory system

### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

### CARCINOGENICITY

Suspected of causing cancer

### REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

### STOT - SINGLE EXPOSURE

May cause respiratory irritation

### STOT - REPEATED EXPOSURE

May cause damage to organs

### ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

## 11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

## SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

### 12.1. Toxicity

|                                   |  |
|-----------------------------------|--|
| PROPYLENE CARBONATE               |  |
| LC50 - for Fish                   | > 1000 mg/l/96h EU Method C.1, Cyprinus carpio             |
| EC50 - for Crustacea              | > 1000 mg/l/48h EU Method C.2, Daphnia magna               |
| EC50 - for Algae / Aquatic Plants | > 900 mg/l/72h OECD Guideline 201, Desmodesmus subspicatus |

|                 |                                   |
|-----------------|-----------------------------------|
| CHLOROBENZENE   |                                   |
| LC50 - for Fish | 7,72 mg/l/96h Pimephales promelas |

### 12.2. Persistence and degradability

|                        |                 |
|------------------------|-----------------|
| CHLOROBENZENE          |                 |
| Solubility in water    | 100 - 1000 mg/l |
| NOT rapidly degradable |                 |

|                     |                   |
|---------------------|-------------------|
| TOSYL ISOCYANATE    |                   |
| Solubility in water | 1000 - 10000 mg/l |
| Rapidly degradable  |                   |

### 12.3. Bioaccumulative potential

|  |   |
|--|---|
| CHLOROBENZENE                          |   |
| Partition coefficient: n-octanol/water | 3 |

|  |     |
|--|-----|
| TOSYL ISOCYANATE                       |     |
| Partition coefficient: n-octanol/water | 0,6 |

### 12.4. Mobility in soil

## SECTION 12. Ecological information ... / >>

CHLOROBENZENE

Partition coefficient: soil/water

2,42

### 12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

### 12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

### 12.7. Other adverse effects

Information not available

## SECTION 13. Disposal considerations

### 13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

### 14.1. UN number or ID number

not applicable

### 14.2. UN proper shipping name

not applicable

### 14.3. Transport hazard class(es)

not applicable

### 14.4. Packing group

not applicable

### 14.5. Environmental hazards

not applicable

### 14.6. Special precautions for user

not applicable

### 14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

## SECTION 15. Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

|                     |        |               |
|---------------------|--------|---------------|
| Product             |        |               |
| Point               | 3 - 40 |               |
| Contained substance |        |               |
| Point               | 75     |               |
| Point               | 74     | DIISOCYANATES |

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors  
not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

VOC (Directive 2004/42/EC) :

Binding primers.

### 15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

## SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

|                          |  |
|--------------------------|--|
| <b>Flam. Liq. 3</b>      | Flammable liquid, category 3   |
| <b>Carc. 2</b>           | Carcinogenicity, category 2  |
| <b>Acute Tox. 4</b>      | Acute toxicity, category 4   |
| <b>STOT RE 2</b>         | Specific target organ toxicity - repeated exposure, category 2             |
| <b>Eye Irrit. 2</b>      | Eye irritation, category 2   |
| <b>Skin Irrit. 2</b>     | Skin irritation, category 2  |
| <b>STOT SE 3</b>         | Specific target organ toxicity - single exposure, category 3               |
| <b>Resp. Sens. 1</b>     | Respiratory sensitization, category 1                                      |
| <b>Skin Sens. 1</b>      | Skin sensitization, category 1   |
| <b>Aquatic Chronic 2</b> | Hazardous to the aquatic environment, chronic toxicity, category 2         |
| <b>H226</b>              | Flammable liquid and vapour.   |
| <b>H351</b>              | Suspected of causing cancer.   |
| <b>H332</b>              | Harmful if inhaled.  |
| <b>H373</b>              | May cause damage to organs through prolonged or repeated exposure.         |
| <b>H319</b>              | Causes serious eye irritation.   |
| <b>H315</b>              | Causes skin irritation.  |
| <b>H335</b>              | May cause respiratory irritation.  |
| <b>H334</b>              | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| <b>H317</b>              | May cause an allergic skin reaction.                                       |
| <b>H411</b>              | Toxic to aquatic life with long lasting effects.                           |
| <b>EUH014</b>            | Reacts violently with water.   |

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

Use descriptor system:

|             |     |   |
|-------------|-----|---|
| <b>ERC</b>  | 10a | Widespread use of articles with low release (outdoor)   |
| <b>ERC</b>  | 11a | Widespread use of articles with low release (indoor)  |
| <b>ERC</b>  | 8a  | Widespread use of non- reactive processing aid (no inclusion into or onto article, indoor)          |
| <b>ERC</b>  | 8c  | Widespread use leading to inclusion into/onto article (indoor)                                      |
| <b>ERC</b>  | 8d  | Widespread use of non- reactive processing aid (no inclusion into or onto article, outdoor)         |
| <b>ERC</b>  | 8f  | Widespread use leading to inclusion into/onto article (outdoor)                                     |
| <b>LCS</b>  | PW  | Widespread use by professional workers  |
| <b>PC</b>   | 9a  | Coatings and paints, thinners, paint removers   |
| <b>PROC</b> | 10  | Roller application or brushing  |
| <b>PROC</b> | 15  | Use as laboratory reagent   |
| <b>PROC</b> | 19  | Manual activities involving hand contact  |
| <b>PROC</b> | 9   | Transfer of substance or mixture into small containers (dedicated filling line, including weighing) |
| <b>SU</b>   | 19  | Building and construction work  |

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)

## SECTION 16. Other information ... / >>

- 20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
- 21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
- 22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

### Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

### CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

### Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 07 / 08 / 09 / 10 / 11 / 12 / 15 / 16.