



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

**SUPERGRIP 9566**  
**Supersedes Date:** 31-May-2022

**Revision date** 17-Apr-2023  
**Revision Number** 1.05

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

### 1.1. Product identifier

**Product Name** SUPERGRIP 9566  
**Pure substance/mixture** Mixture

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

**Recommended use** Hot-melt adhesives  
**Uses advised against** None known

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

#### Company Name

Bostik Limited  
Common Rd  
ST16 3EH  
Stafford UK  
Tel: +44 (1785) 27 26 25  
Fax: +44 (1785) 25 72 36

**E-mail address** SDS.box-EU@bostik.com

### 1.4. Emergency telephone number

**United Kingdom** Bostik: +44 (1785) 272650 (9am to 5pm Mon-Fri)  
NHS: 111

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

|                                  |                     |
|----------------------------------|---------------------|
| <b>Respiratory sensitisation</b> | Category 1 - (H334) |
| <b>Skin sensitisation</b>        | Category 1 - (H317) |
| <b>Carcinogenicity</b>           | Category 2 - (H351) |

### 2.2. Label elements

Contains 4,4'-Methylenediphenyl diisocyanate.o-(p-isocyanatobenzyl)phenyl isocyanate



**Signal word**  
Danger

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## Hazard statements

H317 - May cause an allergic skin reaction.  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H351 - Suspected of causing cancer.

## Precautionary Statements - EU (§28, 1272/2008)

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor  
P362 + P364 - Take off contaminated clothing and wash it before reuse  
P501 - Dispose of contents/ container to an approved waste disposal plant

## Special provisions concerning the labelling of certain mixtures

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

## Additional information

This product requires tactile warnings if supplied to the general public.

## 2.3. Other hazards

Causes mild skin irritation.

## PBT & vPvB

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not applicable

### 3.2 Mixtures

| Chemical name                            | EC No (EU Index No)                           | CAS No    | Weight-%    | Classification according to Regulation (EC) No. 1272/2008 [CLP]   | Specific concentration limit (SCL)  | REACH registration number |
|--|---|-----------|-------------|---|---|---------------------------|
| 4,4'-Methylenediphenyl diisocyanate      | (615-005-00-9)<br>(615-035-00-2)<br>202-966-0 | 101-68-8  | 1 - <2.5    | Acute Tox. 4 (H332)<br>Skin Irrit. 2 (H315)<br>Eye Irrit. 2 (H319)<br>Resp. Sens. 1 (H334)<br>Skin Sens. 1 (H317)<br>Carc. 2 (H351)<br>STOT SE 3 (H335)<br>STOT RE 2 (H373) | STOT SE 3 :: C>=5%<br>Skin Irrit. 2 :: C>=5%<br>Eye Irrit. 2 :: C>=5%<br>Resp. Sens. 1 :: C>=0.1% | 01-2119457014-47-XXXX     |
| o-(p-isocyanatobenzyl)p henyl isocyanate | (615-005-00-9)<br>227-534-9                   | 5873-54-1 | 0.01 - <0.1 | Acute Tox. 4 (H332)<br>Skin Irrit. 2 (H315)<br>Eye Irrit. 2 (H319)<br>Resp. Sens. 1   | Eye Irrit. 2 :: C>=5%<br>Resp. Sens. 1 :: C>=0.1%<br>Skin Irrit. 2 :: C>=5%<br>STOT SE 3 :: C>=5% | 01-2119480143-45-XXXX     |

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|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  |  |  |  | (H334)<br>Skin Sens. 1<br>(H317)<br>Carc. 2 (H351)<br>STOT SE 3<br>(H335)<br>STOT RE 2<br>(H373) |  |  |
|--|--|--|--|--|--|--|

## **Full text of H- and EUH-phrases: see section 16**

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

### **Notes**

See section 16 for more information

| Chemical name                                       | Notes |
|---|-------|
| 4,4'-Methylenediphenyl diisocyanate - 101-68-8      | C,2   |
| o-(p-isocyanatobenzyl)phenyl isocyanate - 5873-54-1 | C,2   |

## **SECTION 4: First aid measures**

### **4.1. Description of first aid measures**

|   |  |
|---|--|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.  |
| <b>Inhalation</b>                         | May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical attention.   |
| <b>Eye contact</b>                        | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.  |
| <b>Skin contact</b>                       | Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor.  |
| <b>Ingestion</b>                          | May produce an allergic reaction. Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.   |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information. |

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

|                 |  |
|-----------------|--|
| <b>Symptoms</b> | May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/or wheezing. Itching. Rashes. Hives. Prolonged contact may cause redness and irritation. |
|-----------------|--|

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

|                        |  |
|------------------------|--|
| <b>Note to doctors</b> | May cause sensitisation in susceptible persons. Treat symptomatically. |
|------------------------|--|

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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

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

**Specific hazards arising from the chemical** Product is or contains a sensitiser. May cause sensitisation by inhalation. May cause sensitisation by skin contact.

**Hazardous combustion products** Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Hydrogen cyanide. Isocyanates.

### 5.3. Advice for firefighters

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## SECTION 6: Accidental release measures

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

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

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

**Methods for containment** Keep from any possible contact with water.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated

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clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Keep away from water or moist air.

**Recommended storage temperature** Keep at temperatures between 10 and 35 °C.

## 7.3. Specific end use(s)

**Specific use(s)**  
Hot-melt adhesives.

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

**Other information** Observe technical data sheet.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure Limits

| Chemical name  | European Union | United Kingdom  |
|--|----------------|---|
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8      | -              | TWA: 0.02 mg/m <sup>3</sup><br>STEL: 0.07 mg/m <sup>3</sup><br>Sen+ |
| o-(p-isocyanatobenzyl)phenyl isocyanate<br>5873-54-1 | -              | TWA: 0.02 mg/m <sup>3</sup><br>STEL: 0.07 mg/m <sup>3</sup><br>Sen+ |

| Chemical name  | European Union | Ireland   | United Kingdom   |
|--|----------------|---|--|
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8      | -              | 1 µmol/mol Creatinine (urine - urinary Diamine post task) | 1 mmol isocyanate-derived diamine/mol creatinine urine |
| o-(p-isocyanatobenzyl)phenyl isocyanate<br>5873-54-1 | -              | 1 µmol/mol Creatinine (urine - urinary Diamine post task) | -  |

**Derived No Effect Level (DNEL)** No information available

| Derived No Effect Level (DNEL)                  |                |                                |               |
|---|----------------|--------------------------------|---------------|
| 4,4'-Methylenediphenyl diisocyanate (101-68-8)  |                |                                |               |
| Type  | Exposure route | Derived No Effect Level (DNEL) | Safety factor |
| worker<br>Short term<br>Systemic health effects | Dermal         | 50 mg/kg bw/d                  |               |
| worker<br>Short term<br>Systemic health effects | Inhalation     | 0.1 mg/m <sup>3</sup>          |               |
| worker<br>Short term<br>Local health effects    | Dermal         | 28700 µg/cm <sup>2</sup>       |               |
| worker<br>Short term<br>Local health effects    | Inhalation     | 0.1 mg/m <sup>3</sup>          |               |
| worker<br>Long term                             | Inhalation     | 0.05 mg/m <sup>3</sup>         |               |

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|                         |            |                        |  |
|-------------------------|------------|------------------------|--|
| Systemic health effects |            |                        |  |
| worker                  | Inhalation | 0.05 mg/m <sup>3</sup> |  |
| Long term               |            |                        |  |
| Local health effects    |            |                        |  |

| <b>o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)</b> |                |                                |               |
|--|----------------|--------------------------------|---------------|
| Type   | Exposure route | Derived No Effect Level (DNEL) | Safety factor |
| worker   | Inhalation     | 0.05 mg/m <sup>3</sup>         |               |
| Long term  |                |                                |               |
| Local health effects                                       |                |                                |               |
| worker   | Inhalation     | 0.1 mg/m <sup>3</sup>          |               |
| Short term   |                |                                |               |
| Local health effects                                       |                |                                |               |

| <b>Derived No Effect Level (DNEL)</b>                 |                |                                |               |
|---|----------------|--------------------------------|---------------|
| <b>4,4'-Methylenediphenyl diisocyanate (101-68-8)</b> |                |                                |               |
| Type  | Exposure route | Derived No Effect Level (DNEL) | Safety factor |
| Consumer  | Dermal         | 25 mg/kg bw/d                  |               |
| Short term  |                |                                |               |
| Systemic health effects                               |                |                                |               |
| Consumer  | Inhalation     | 0.05 mg/m <sup>3</sup>         |               |
| Short term  |                |                                |               |
| Systemic health effects                               |                |                                |               |
| Consumer  | Oral           | 20 mg/kg bw/d                  |               |
| Short term  |                |                                |               |
| Systemic health effects                               |                |                                |               |
| Consumer  | Dermal         | 17200 µg/cm <sup>2</sup>       |               |
| Short term  |                |                                |               |
| Local health effects                                  |                |                                |               |
| Consumer  | Inhalation     | 0.05 mg/m <sup>3</sup>         |               |
| Short term  |                |                                |               |
| Local health effects                                  |                |                                |               |
| Consumer  | Inhalation     | 0.025 mg/m <sup>3</sup>        |               |
| Long term   |                |                                |               |
| Systemic health effects                               |                |                                |               |
| Consumer  | Inhalation     | 0.025 mg/m <sup>3</sup>        |               |
| Long term   |                |                                |               |
| Local health effects                                  |                |                                |               |

## Predicted No Effect Concentration (PNEC)

| <b>Predicted No Effect Concentration (PNEC)</b>       |  |
|---|--|
| <b>4,4'-Methylenediphenyl diisocyanate (101-68-8)</b> |  |
| Environmental compartment                             | Predicted No Effect Concentration (PNEC) |
| Freshwater  | 1 mg/l                                   |
| Marine water  | 0.1 mg/l                                 |
| Soil  | 1 mg/kg dry weight                       |
| Sewage treatment plant                                | 1 mg/l                                   |
| Freshwater - intermittent                             | 10 mg/l                                  |

| <b>o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)</b> |  |
|--|--|
| Environmental compartment                                  | Predicted No Effect Concentration (PNEC) |
| Freshwater   | 1 mg/l                                   |
| Marine water   | 0.1 mg/l                                 |
| Sewage treatment plant                                     | 1 mg/l                                   |
| Soil   | 1 mg/kg dry weight                       |

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|                           |         |
|---------------------------|---------|
| Freshwater - intermittent | 10 mg/l |
|---------------------------|---------|

## 8.2. Exposure controls

### Engineering controls

**Molten** . Ensure adequate ventilation, especially in confined areas. Vapours/aerosols must be exhausted directly at the point of origin.

### Personal protective equipment

#### Eye/face protection

Wear safety glasses with side shields (or goggles). Eye protection must conform to standard EN 166.

#### Hand protection

Heat resistant gloves are recommended when handling molten materials. Gloves must conform to standard EN 407. Unsuitable protective clothing. Wet gloves.

#### Skin and body protection

Wear suitable protective clothing.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection. During spraying wear suitable respiratory equipment.

#### Recommended filter type:

Wear a respirator conforming to EN 140 with Type A/P2 filter or better. Organic gases and vapours filter conforming to EN 14387.

**Environmental exposure controls** Do not allow uncontrolled discharge of product into the environment.

## SECTION 9: Physical and chemical properties

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

|                        |                           |
|------------------------|---------------------------|
| <b>Physical state</b>  | Solid                     |
| <b>Appearance</b>      | Blocks                    |
| <b>Colour</b>          | Cream                     |
| <b>Odour</b>           | No information available. |
| <b>Odour threshold</b> | No information available  |

| <u>Property</u>                                | <u>Values</u>            | <u>Remarks • Method</u>       |
|--|--------------------------|-------------------------------|
| <b>Melting point / freezing point</b>          | No data available        | None known                    |
| <b>Initial boiling point and boiling range</b> | No data available        | None known                    |
| <b>Flammability</b>                            | No data available        | None known                    |
| <b>Flammability Limit in Air</b>               |                          | None known                    |
| <b>Upper flammability or explosive limits</b>  | No data available        |                               |
| <b>Lower flammability or explosive limits</b>  | No data available        |                               |
| <b>Flash point</b>                             | > 100 °C                 | CC (closed cup)               |
| <b>Autoignition temperature</b>                | No data available        | None known                    |
| <b>Decomposition temperature</b>               |                          | None known                    |
| <b>pH</b>                                      | No data available        | None known.                   |
| <b>pH (as aqueous solution)</b>                | No data available        | None known                    |
| <b>Kinematic viscosity</b>                     | No data available        | None known                    |
| <b>Dynamic viscosity</b>                       | 22000 - 30000 mPa s      | Spindle A29 @ 20 rpm @ 120 °C |
| <b>Water solubility</b>                        | Insoluble in water.      |                               |
| <b>Solubility(ies)</b>                         | No data available        | None known                    |
| <b>Partition coefficient</b>                   | No data available        | None known                    |
| <b>Vapour pressure</b>                         | No data available        | None known                    |
| <b>Relative density</b>                        | 1.08                     | None known                    |
| <b>Bulk Density</b>                            | No data available        |                               |
| <b>Liquid Density</b>                          | 1.08 g/cm <sup>3</sup>   |                               |
| <b>Relative vapour density</b>                 | No data available        | None known                    |
| <b>Particle characteristics</b>                |                          |                               |
| <b>Particle Size</b>                           | No information available |                               |
| <b>Particle Size Distribution</b>              | No information available |                               |

### 9.2. Other information

|                          |     |                   |
|--------------------------|-----|-------------------|
| <b>Solid content (%)</b> | 100 |                   |
| <b>VOC content</b>       |     | No data available |

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9.2.1. Information with regards to physical hazard classes  
Not applicable

9.2.2. Other safety characteristics  
No information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity** No information available.

### 10.2. Chemical stability

**Stability** Reacts with water.

#### Explosion data

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

**Hazardous polymerisation** Hazardous polymerisation may occur.

### 10.4. Conditions to avoid

**Conditions to avoid** Exposure to water.

### 10.5. Incompatible materials

**Incompatible materials** None known based on information supplied.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Hydrogen cyanide. Thermal decomposition can lead to release of toxic/corrosive gases and vapours. Phosphorus oxides. Acrylates.

## SECTION 11: Toxicological information

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

#### Information on likely routes of exposure

##### Product Information

**Inhalation** Specific test data for the substance or mixture is not available. May cause sensitisation in susceptible persons. (based on components).

**Eye contact** Based on available data, the classification criteria are not met.

**Skin contact** Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause sensitisation by skin contact. Causes mild skin irritation.

**Ingestion** Specific test data for the substance or mixture is not available. May cause additional affects as listed under "Inhalation".



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## Symptoms related to the physical, chemical and toxicological characteristics

### Symptoms

Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives. Prolonged contact may cause redness and irritation.

## Acute toxicity

### Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

|                               |             |
|-------------------------------|-------------|
| ATEmix (oral)                 | >5000 mg/kg |
| ATEmix (dermal)               | >5000 mg/kg |
| ATEmix (inhalation-gas)       | >20000 ppm  |
| ATEmix (inhalation-dust/mist) | 81.30 mg/l  |
| ATEmix (inhalation-vapour)    | >20 mg/l    |

### Component Information

| Chemical name                           | Oral LD50                                      | Dermal LD50   | Inhalation LC50        |
|---|--|---|------------------------|
| 4,4'-Methylenediphenyl diisocyanate     | =31600 mg/kg (Rattus)<br>= 9200 mg/kg (Rattus) | LD 50 > 9400 mg/kg<br>(Oryctolagus cuniculus)<br>OECD 402 | =1.5 mg/L (Rattus) 4 h |
| o-(p-isocyanatobenzyl)phenyl isocyanate | LD50 >2000 mg/Kg (Rattus)                      | LD 50 > 9400 mg/kg<br>(Oryctolagus cuniculus)<br>OECD 402 | 1.5 mg/L (4h) Rat      |

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

### Skin corrosion/irritation

Classification based on data available for ingredients. Causes mild skin irritation.

4,4'-Methylenediphenyl diisocyanate (101-68-8)

| Method   | Species | Exposure route | Effective dose | Exposure time | Results  |
|--|---------|----------------|----------------|---------------|----------|
| OECD Test No. 404:<br>Acute Dermal<br>Irritation/Corrosion | Rabbit  | Dermal         |                |               | Irritant |

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)

| Method   | Species | Exposure route | Effective dose | Exposure time | Results  |
|--|---------|----------------|----------------|---------------|----------|
| OECD Test No. 404:<br>Acute Dermal<br>Irritation/Corrosion | Rabbit  |                |                |               | irritant |

**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.

4,4'-Methylenediphenyl diisocyanate (101-68-8)

| Method  | Species | Exposure route | Effective dose | Exposure time | Results             |
|---|---------|----------------|----------------|---------------|---------------------|
| OECD Test No. 405:<br>Acute Eye<br>Irritation/Corrosion | Rabbit  | Eye            | 0.1 mL         | 24 hours      | Mild eye irritation |

### Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

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4,4'-Methylenediphenyl diisocyanate (101-68-8)

| Method                                | Species    | Exposure route | Results     |
|---------------------------------------|------------|----------------|-------------|
| OECD GD 39                            | Rat        | Inhalation     | Sensitizing |
| OECD Test No. 406: Skin Sensitisation | Guinea pig | Dermal         | Sensitizing |

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

Component Information

4,4'-Methylenediphenyl diisocyanate (101-68-8)

| Method   | Species      | Results       |
|--|--------------|---------------|
| Regulation (EC) No. 440/2008, Annex, B.13/14 (Ames test)   | in vitro     | Not mutagenic |
| OECD Test No. 474: Mammalian Erythrocyte Micronucleus Test | Rat, in vivo | Not mutagenic |

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component Information

4,4'-Methylenediphenyl diisocyanate (101-68-8)

| Method   | Species | Results                                   |
|--|---------|---|
| OECD Test No. 453: Combined Chronic Toxicity/Carcinogenicity Studies | Rat     | Limited evidence of a carcinogenic effect |

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)

| Method   | Species | Results      |
|--|---------|--------------|
| OECD Test No. 453: Combined Chronic Toxicity/Carcinogenicity Studies | Rat     | Carcinogenic |

| Chemical name                           | European Union |
|---|----------------|
| 4,4'-Methylenediphenyl diisocyanate     | Carc. 2        |
| o-(p-isocyanatobenzyl)phenyl isocyanate | Carc. 2        |

**Reproductive toxicity** Based on available data, the classification criteria are not met.

4,4'-Methylenediphenyl diisocyanate (101-68-8)

| Method  | Species | Results                   |
|---|---------|---------------------------|
| OECD Test No. 414: Pre-natal Development Toxicity Study | Rat     | LOAEL 9 mg/m <sup>3</sup> |

**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.

4,4'-Methylenediphenyl diisocyanate (101-68-8)

| Method | Species     | Exposure route        | Effective dose                   | Exposure time | Results    |
|--------|-------------|-----------------------|----------------------------------|---------------|------------|
|        | Rat, female | Inhalation, Dust/Mist | 0,0.2,0.7, 2.1 mg/m <sup>3</sup> | 2 Years       | Category 2 |

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

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## 11.2. Information on other hazards

### 11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

### 11.2.2. Other information

Other adverse effects No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Ecotoxicity

| Chemical name   | Algae/aquatic plants  | Fish   | Toxicity to microorganisms | Crustacea                                 | M-Factor | M-Factor (long-term) |
|---|---|--|----------------------------|---|----------|----------------------|
| 4,4'-Methylenediphenyl diisocyanate<br>101-68-8       | ErC50 (72h)<br>>1640 mg/L<br>Algae<br>(scenedesmus subspicatus)<br>(OECD 201) | >1000 mg/l<br>(Danio rerio)                          | -                          | EC50 (24H)<br>>1000 mg/L<br>Daphnia magna |          |                      |
| o-(p-isocyanatobenzyl) phenyl isocyanate<br>5873-54-1 | ErC50 (72h)<br>>1640 mg/L<br>Algae<br>(scenedesmus subspicatus)<br>(OECD 201) | LC50 (96 h) ><br>1000 mg/l (Danio rerio)<br>OECD 203 | -                          | EC50 (24H)<br>>1000 mg/L<br>Daphnia magna |          |                      |

### 12.2. Persistence and degradability

Persistence and degradability No information available.

4,4'-Methylenediphenyl diisocyanate (101-68-8)

| Method   | Exposure time | Value             | Results                   |
|--|---------------|-------------------|---------------------------|
| OECD Test No. 302C: Inherent Biodegradability: Modified MITI Test (II) | 28 days       | 0% biodegradation | Not readily biodegradable |

### 12.3. Bioaccumulative potential

#### Bioaccumulation

##### Component Information

| Chemical name                       | Partition coefficient |
|-------------------------------------|-----------------------|
| 4,4'-Methylenediphenyl diisocyanate | 4.51                  |

### 12.4. Mobility in soil

Mobility in soil No information available.

### 12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.

| Chemical name | PBT and vPvB assessment |
|---------------|-------------------------|
|---------------|-------------------------|

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|   |                                 |
|---|---------------------------------|
| 4,4'-Methylenediphenyl diisocyanate     | The substance is not PBT / vPvB |
| o-(p-isocyanatobenzyl)phenyl isocyanate | The substance is not PBT / vPvB |

## 12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

## 12.7. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

Waste codes / waste designations according to EWC 15 01 10\*: Packaging containing residues of or contaminated by dangerous substances. 16 03 03\* inorganic wastes containing hazardous substances. 16 05 05 gases in pressure containers other than those mentioned in 16 05 04. Waste codes should be assigned by the user based on the application for which the product was used.

European Waste Catalogue 08 05 01\* waste isocyanates

Other information Waste codes should be assigned by the user based on the application for which the product was used.

## SECTION 14: Transport information

### Land transport (ADR/RID)

14.1 UN number or ID number Not regulated  
14.2 UN proper shipping name Not regulated  
14.3 Transport hazard class(es) Not regulated  
14.4 Packing group Not regulated  
14.5 Environmental hazards Not applicable  
14.6 Special precautions for user  
Special Provisions None

### IMDG

14.1 UN number or ID number Not regulated  
14.2 UN proper shipping name Not regulated  
14.3 Transport hazard class(es) Not regulated  
14.4 Packing group Not regulated  
14.5 Marine pollutant NP  
14.6 Special precautions for user  
Special Provisions None

14.7 Maritime transport in bulk according to IMO instruments

Transport in bulk according to Annex II of MARPOL and the IBC Code Not applicable

### Air transport (ICAO-TI / IATA-DGR)

14.1 UN number or ID number Not regulated  
14.2 UN proper shipping name Not regulated  
14.3 Transport hazard class(es) Not regulated  
14.4 Packing group Not regulated

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**14.5 Environmental hazards** Not applicable  
**14.6 Special precautions for user**  
**Special Provisions** None

## Section 15: REGULATORY INFORMATION

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

#### European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Check whether measures in accordance with Directive 94/33/EC for the protection of young people at work must be taken.

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

#### Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

##### **SVHC: Substances of Very High Concern for Authorisation:**

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

##### **EU-REACH (1907/2006) - Annex XVII - Substances subject to Restriction**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

| Chemical name                       | CAS No   | Restricted substance per REACH Annex XVII |
|-------------------------------------|----------|---|
| Diisocyanates                       | --       | 74  |
| 4,4'-Methylenediphenyl diisocyanate | 101-68-8 | 56[a].<br>75.<br>74.                      |

**56** . If product supplied to the general public with substance  $\geq 0.1\%$ , then gloves must be provided with the product. **74** If product supplied to the industrial or professional users with total monomeric diisocyanates  $\geq 0.1\%$ , then its packaging must mention "As from 24 August 2023 adequate training is required before industrial or professional use".

##### **Substance subject to authorisation per REACH Annex XIV**

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

##### **Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

##### **Persistent Organic Pollutants**

Not applicable

#### National regulations

### 15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out by the Reach registrants for substances registered at  $>10$  tpa. No

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Chemical Safety Assessment has been carried out for this mixture

## SECTION 16: Other information

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Full text of H-Statements referred to under section 3

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

#### **Notes relating to the identification, classification and labelling of substances**

**Note C:** Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers

#### **Notes relating to the classification and labelling of mixtures**

**Note 2:** The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture

#### **Legend**

|         |   |
|---------|---|
| TWA     | TWA (time-weighted average)   |
| STEL    | STEL (Short Term Exposure Limit)  |
| Ceiling | Ceiling Limit Value   |
| *       | Skin designation  |
| SVHC    | Substance(s) of Very High Concern   |
| PBT     | Persistent, Bioaccumulative, and Toxic (PBT) Chemicals                              |
| vPvB    | Very Persistent and very Bioaccumulative (vPvB) Chemicals                           |
| STOT RE | Specific target organ toxicity - Repeated exposure                                  |
| STOT SE | Specific target organ toxicity - Single exposure                                    |
| EWC     | European Waste Catalogue  |
| ADR     | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| IMDG    | International Maritime Dangerous Goods (IMDG)                                       |
| IATA    | International Air Transport Association (IATA)                                      |
| RID     | Regulations concerning the International Transport of Dangerous Goods by Rail       |

#### **Key literature references and sources for data**

No information available

**Prepared By** Product Safety & Regulatory Affairs

**Revision date** 17-Apr-2023

#### Indication of changes

**Revision note** Not applicable.

**Training Advice** When working with hazardous materials, regular training of operators is required by law AS FROM 24 AUGUST 2023 ADEQUATE TRAINING IS REQUIRED BEFORE INDUSTRIAL OR PROFESSIONAL USE For further information, please contact: <https://www.safeusediisocyanates.eu/>

**Further information** No information available

**Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)**

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## **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**