



## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**1.1 Product identifier:** Adoseal - Polyurethane lacquer varnish

**Other means of identification:** Not relevant

**1.2 Relevant identified uses of the substance or mixture and uses advised against:**

Relevant uses: Polyurethane reagent. For industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3

**1.3 Details of the supplier of the safety data sheet:** Adomast Manufacturing

Ltd

Barkston Road, Carlton Industrial Estate

S71 3HU Barnsley - UK - United Kingdom

Phone: 01226707863 alisdair@adomast.co.uk

www.adomast.co.uk

**1.4 Emergency telephone number:** 07887 416399

## SECTION 2: HAZARDS IDENTIFICATION

**2.1 Classification of the substance or mixture:**

**GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):**

Classification of this product has been carried out in accordance with GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567).

Acute Tox. 3: Acute inhalation toxicity, Category 3, H331

Acute Tox. 4: Acute toxicity on contact with skin, Category 4, H312

Flam. Liq. 3: Flammable liquids, Category 3, H226

Resp. Sens. 1: Sensitisation, respiratory, Category 1, H334

Skin Irrit. 2: Skin irritation, Category 2, H315

**2.2 Label elements:**

**GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):**

**Danger**



**Hazard statements:**

Acute Tox. 3: H331 - Toxic if inhaled.

Acute Tox. 4: H312 - Harmful in contact with skin.

Flam. Liq. 3: H226 - Flammable liquid and vapour.

Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Irrit. 2: H315 - Causes skin irritation.

**Precautionary statements:**

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P370+P378: In case of fire: Use Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC) to extinguish.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P501: Dispose of the contents and/or its container in line with regulations on dangerous waste or packaging and waste packaging respectively.

**Supplementary information:**

EUH204: Contains isocyanates. May produce an allergic reaction.

**Substances that contribute to the classification** Xylene; Toluene Diisocyanate

**Additional Labelling:**

## SECTION 2: HAZARDS IDENTIFICATION (continued)

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

### 2.3 Other hazards:

Product does not meet PBT/vPvB criteria

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substance:

Non-applicable

### 3.2 Mixture:

**Chemical description:** Polyurethane resin

#### Components:

In accordance with Annex II of The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, the product contains:

| Identification  | Chemical name/Classification                                                                                                                                                                          | Concentration                                                                                            |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| CAS: 1330-20-7  | <b>Xylene</b><br>Acute Tox. 4: H312+H332; Flam. Liq. 3: H226; Skin Irrit. 2: H315 - Warning                                                                                                           |  <b>50 - &lt;75 %</b> |
| CAS: 26471-62-5 | <b>Toluene Diisocyanate</b><br>Acute Tox. 2: H330; Aquatic Chronic 3: H412; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT SE 3: H335 - Danger |  <b>&lt;1 %</b>       |

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

| Identification                          | Acute toxicity  |                   | Genus |
|-----------------------------------------|-----------------|-------------------|-------|
| Xylene<br>CAS: 1330-20-7                | LD50 oral       | Not relevant      |       |
|                                         | LD50 dermal     | 1100 mg/kg (ATEi) |       |
|                                         | LC50 inhalation | 11 mg/L (ATEi)    |       |
| Toluene Diisocyanate<br>CAS: 26471-62-5 | LD50 oral       | Not relevant      |       |
|                                         | LD50 dermal     | Not relevant      |       |
|                                         | LC50 inhalation | 0.5 mg/L (ATEi)   |       |

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures:

Request medical assistance immediately, showing the SDS of this product.

#### By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance. **By skin contact:**

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection. **By eye contact:**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

#### By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

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## SECTION 4: FIRST AID MEASURES (continued)

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of any immediate medical attention and special treatment needed:** Not relevant

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media:

#### Suitable extinguishing media:

Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC) **Unsuitable extinguishing media:** Water jet

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

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

### 5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...).

#### Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

#### For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8).

Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground. **For emergency responders:**

Wear protective equipment. Keep unprotected persons away. See section 8.

### 6.2 Environmental precautions:

It is recommended to avoid environmental spillage of both the product and its container.

### 6.3 Methods and material for containment and cleaning up: It is

recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

### 6.4 Reference to other sections: See sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling: A.-

General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

## SECTION 7: HANDLING AND STORAGE (continued)

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Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in The Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 and with the minimum requirements for protecting the security and health of workers under the selection criteria of The Dangerous Substances and Explosive Atmospheres Regulations 2002, 2002 No. 2776. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

**7.2 Conditions for safe storage, including any incompatibilities:**

A.- Specific storage requirements

Minimum Temp.: 5 °C  
Maximum Temp.: 30 °C  
Maximum time: 12 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s):**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the workplace:

EH40/2005 Workplace exposure limits, fourth edition, published 2020:

| Identification                          | Occupational exposure limits |         |                       |
|-----------------------------------------|------------------------------|---------|-----------------------|
| Xylene <sup>(1)</sup><br>CAS: 1330-20-7 | WEL (8h)                     | 50 ppm  | 220 mg/m <sup>3</sup> |
|                                         | WEL (15 min)                 | 100 ppm | 441 mg/m <sup>3</sup> |

<sup>(1)</sup> Skin

BIOLOGICAL MONITORING GUIDANCE VALUES (BMGVs) - EH40/2005 - Isocyanates (applies to HDI, IPDI, TDI and MDI): 1 µmol isocyanate-derived diamine/mol creatinine in urine. Sampling Time: At the end of the period of exposure. **Biological limit values:**

BIOLOGICAL MONITORING GUIDANCE VALUES (BMGVs) - EH40/2005

| Identification           | NULL             | NULL                             | NULL       |
|--------------------------|------------------|----------------------------------|------------|
| Xylene<br>CAS: 1330-20-7 | 1030 mg/g (NULL) | Methyl hippuric acid<br>in urine | Post shift |

**DNEL (Workers):**

|                                                          |            | Short exposure        |                         | Long exposure           |                        |
|----------------------------------------------------------|------------|-----------------------|-------------------------|-------------------------|------------------------|
| Identification                                           |            | Systemic              | Local                   | Systemic                | Local                  |
| Xylene<br>CAS: 1330-20-7<br>EC: 215-535-7                | Oral       | Not relevant          | Not relevant            | Not relevant            | Not relevant           |
|                                                          | Dermal     | Not relevant          | Not relevant            | 212 mg/kg               | Not relevant           |
|                                                          | Inhalation | 442 mg/m <sup>3</sup> | 442 mg/m <sup>3</sup>   | 221 mg/m <sup>3</sup>   | 221 mg/m <sup>3</sup>  |
| Toluene Diisocyanate<br>CAS: 26471-62-5<br>EC: 247-722-4 | Oral       | Not relevant          | Not relevant            | Not relevant            | Not relevant           |
|                                                          | Dermal     | Not relevant          | Not relevant            | 0.14 mg/kg              | Not relevant           |
|                                                          | Inhalation | Not relevant          | 0.035 mg/m <sup>3</sup> | 0.035 mg/m <sup>3</sup> | 0.14 mg/m <sup>3</sup> |

**DNEL (General population):**

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

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|                                           |            | Short exposure        |                       | Long exposure          |                        |
|-------------------------------------------|------------|-----------------------|-----------------------|------------------------|------------------------|
| Identification                            |            | Systemic              | Local                 | Systemic               | Local                  |
| Xylene<br>CAS: 1330-20-7<br>EC: 215-535-7 | Oral       | Not relevant          | Not relevant          | 12.5 mg/kg             | Not relevant           |
|                                           | Dermal     | Not relevant          | Not relevant          | 125 mg/kg              | Not relevant           |
|                                           | Inhalation | 260 mg/m <sup>3</sup> | 260 mg/m <sup>3</sup> | 65.3 mg/m <sup>3</sup> | 65.3 mg/m <sup>3</sup> |

**PNEC:**

| Identification                                              |              |              |                         |
|-------------------------------------------------------------|--------------|--------------|-------------------------|
| Xylene<br>CAS: 1330-20-7<br>EC: 215-535-7                   | STP          | 6.58 mg/L    | Fresh water             |
|                                                             | Soil         | 2.31 mg/kg   | Marine water            |
|                                                             | Intermittent | 0.327 mg/L   | Sediment (Fresh water)  |
|                                                             | Oral         | Not relevant | Sediment (Marine water) |
| Toluene<br>Diisocyanate<br>CAS: 26471-62-5<br>EC: 247-722-4 | STP          | 1 mg/L       | Fresh water             |
|                                                             | Soil         | 1 mg/kg      | Marine water            |
|                                                             | Intermittent | 0.125 mg/L   | Sediment (Fresh water)  |
|                                                             | Oral         | Not relevant | Sediment (Marine water) |

**8.2 Exposure controls:**

**A.- Individual protection measures, such as personal protective equipment**

In accordance with the order of importance to control professional exposure it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the occupational exposure limits. In case of using personal protective equipment it should have <<UKCA marking>> or <<CE marking>>. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

**B.- Respiratory protection**

| Pictogram                                                                                                                     | PPE                               | Remarks                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>Mandatory respiratory tract protection | Filter mask for gases and vapours | Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment. |

**C.- Specific protection for the hands**

| Pictogram                                                                                                        | PPE                                                                                                                               | Remarks                                          |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <br>Mandatory hand protection | Chemical protective gloves (Material: Linear low density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 mm) | Replace the gloves at any sign of deterioration. |

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

**D.- Eye and face protection**

| Pictogram                                                                                                        | PPE         | Remarks                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------|
| <br>Mandatory face protection | Face shield | Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing. |

**E.- Body protection**

| Pictogram | PPE | Remarks |
|-----------|-----|---------|
|-----------|-----|---------|

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**Adoseal - Polyurethane lacquer varnish**



Mandatory  
complete body  
protection

Disposable clothing for protection against  
chemical risks, with antistatic and fireproof  
properties

For professional use only. Clean periodically according to the manufacturer's  
instructions.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

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| Pictogram                                                                                                      | PPE                                                                                                 | Remarks                                     |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------|
| <br>Mandatory foot protection | Safety footwear for protection against chemical risk, with antistatic and heat resistant properties | Replace boots at any sign of deterioration. |

F.- Additional emergency measures

| Emergency measure                                                                                     | Standards                                       | Emergency measure                                                                                      | Standards                                      |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <br>Emergency shower | ANSI Z358-1<br>ISO 3864-1:2011, ISO 3864-4:2011 | <br>Eyewash stations | DIN 12 899<br>ISO 3864-1:2011, ISO 3864-4:2011 |

**Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**The Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2012:**

V.O.C. (Supply): 59.5 % weight  
V.O.C. density at 20 °C: 581.67 kg/m<sup>3</sup> (581.67 g/L)

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet. **Appearance:**

Physical state at 20 °C: Liquid  
Appearance: Transparent  
Colour:  Amber  
Odour: Solvent  
Odour threshold: Not relevant \*

**Volatility:**

Boiling point at atmospheric pressure: 138 °C  
Vapour pressure at 20 °C: 744 Pa  
Vapour pressure at 50 °C: 4115.54 Pa (4.12 kPa)  
Evaporation rate at 20 °C: Not relevant \*

**Product description:**

Density at 20 °C: 977.6 kg/m<sup>3</sup>  
Relative density at 20 °C: 0.978  
Dynamic viscosity at 20 °C: Not relevant \* Kinematic viscosity at 20 °C: Not relevant \*  
Kinematic viscosity at 40 °C: Not relevant \*  
Concentration: Not relevant \* pH: Not relevant \*  
Vapour density at 20 °C: Not relevant \*  
Partition coefficient n-octanol/water 20 °C: Not relevant \*  
Solubility in water at 20 °C: Not relevant \* Solubility properties: Not relevant \* Decomposition temperature: Not relevant \*  
Melting point/freezing point: Not relevant \*

\*Not relevant due to the nature of the product, not providing information property of its hazards.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)**

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**Flammability:**

Flash Point: 25 °C  
Flammability (solid, gas): Not relevant \*  
Autoignition temperature: 465 °C  
Lower flammability limit: Not available  
Upper flammability limit: Not available

**Particle characteristics:**

Median equivalent diameter: Non-applicable

**9.2 Other information:**

**Information with regard to physical hazard classes:**

Explosive properties: Not relevant \*  
Oxidising properties: Not relevant \* Corrosive to metals: Not relevant \* Heat of combustion: Not relevant \*  
Aerosols-total percentage (by mass) of flammable Not relevant \* components:

**Other safety characteristics:**

Surface tension at 20 °C: Not relevant \*  
Refraction index: Not relevant \*

\*Not relevant due to the nature of the product, not providing information property of its hazards.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity:**

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

**10.2 Chemical stability:**

Chemically stable under the indicated conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

**10.4 Conditions to avoid:**

Applicable for handling and storage at room temperature:

| 10.5 | Shock and friction | Contact with air | Increase in temperature | Sunlight            | Humidity            |
|------|--------------------|------------------|-------------------------|---------------------|---------------------|
|      | Not applicable     | Not applicable   | Avoid direct impact     | Avoid direct impact | Avoid direct impact |

**Incompatible materials:**

| 10.6 | Acids      | Water               | Oxidising materials | Combustible materials | Others                                                                       |
|------|------------|---------------------|---------------------|-----------------------|------------------------------------------------------------------------------|
|      | Precaution | Avoid direct impact | Avoid direct impact | Not applicable        | Avoid alkalines, heavy metals, reducing agents, peroxide accelerating agents |

**Hazardous decomposition products:**

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects:**

The experimental information related to the toxicological properties of the product itself is not available **Dangerous health implications:**

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## SECTION 11: TOXICOLOGICAL INFORMATION (continued)

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure: A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. For more information see section 3
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

- Acute toxicity : Inhalation after prolonged exposure may be lethal.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Contact with the skin and the eyes (acute effect):
  - Contact with the skin: Produces skin inflammation.
  - Contact with the eyes: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with carcinogenic effects. For more information see section 3.

IARC: Xylene (3); Toluene Diisocyanate (2B)

- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Prolonged exposure can result in specific respiratory hypersensitivity.
- Skin: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with sensitising effects. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3. **Other information:** Not relevant

### Specific toxicology information on the substances:

| Identification                          | Acute toxicity  |                   | Genus |
|-----------------------------------------|-----------------|-------------------|-------|
| Xylene<br>CAS: 1330-20-7                | LD50 oral       | 3523 mg/kg        | Rat   |
|                                         | LD50 dermal     | 1100 mg/kg (ATEi) |       |
|                                         | LC50 inhalation | 11 mg/L (ATEi)    |       |
| Toluene Diisocyanate<br>CAS: 26471-62-5 | LD50 oral       | 3360 mg/kg        | Rat   |
|                                         | LD50 dermal     |                   |       |
|                                         | LC50 inhalation | 0.5 mg/L (ATEi)   |       |

## SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

## SECTION 12: ECOLOGICAL INFORMATION (continued)

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Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

#### 12.1 Toxicity:

##### Acute toxicity:

| Identification                          | Concentration         | Species             | Genus      |
|-----------------------------------------|-----------------------|---------------------|------------|
| Toluene Diisocyanate<br>CAS: 26471-62-5 | LC50 133 mg/L (96 h)  | Oncorhynchus mykiss | Fish       |
|                                         | EC50 12.5 mg/L (48 h) | Daphnia magna       | Crustacean |
|                                         | EC50 4300 mg/L (96 h) | Chlorella vulgaris  | Algae      |

##### Chronic toxicity:

| Identification                          | Concentration     | Species             | Genus      |
|-----------------------------------------|-------------------|---------------------|------------|
| Xylene<br>CAS: 1330-20-7                | NOEC 1.3 mg/L     | Oncorhynchus mykiss | Fish       |
|                                         | NOEC 1.17 mg/L    | Ceriodaphnia dubia  | Crustacean |
| Toluene Diisocyanate<br>CAS: 26471-62-5 | NOEC Not relevant |                     |            |
|                                         | NOEC 1.1 mg/L     | Daphnia magna       | Crustacean |

#### 12.2 Persistence and degradability:

##### Substance-specific information:

| Identification           | Degradability         | Biodegradability           |
|--------------------------|-----------------------|----------------------------|
| Xylene<br>CAS: 1330-20-7 | BOD5 Not relevant     | Concentration Not relevant |
|                          | COD Not relevant      | Period 28 days             |
|                          | BOD5/COD Not relevant | % Biodegradable 88 %       |

#### 12.3 Bioaccumulative potential:

##### Substance-specific information:

| Identification           | Bioaccumulation potential |
|--------------------------|---------------------------|
| Xylene<br>CAS: 1330-20-7 | BCF 9                     |
|                          | Pow Log 2.77              |
|                          | Potential Low             |

#### 12.4 Mobility in soil:

| Identification           | Absorption/desorption        | Volatility                          |
|--------------------------|------------------------------|-------------------------------------|
| Xylene<br>CAS: 1330-20-7 | Koc 202                      | Henry 524.86 Pa·m <sup>3</sup> /mol |
|                          | Conclusion Moderate          | Dry soil Yes                        |
|                          | Surface tension Not relevant | Moist soil Yes                      |

#### 12.5 Results of PBT and vPvB assessment: Product

does not meet PBT/vPvB criteria

#### 12.6 Other adverse effects:

Not described

### SECTION 13: DISPOSAL CONSIDERATIONS



### 13.1 Waste treatment methods:

| Code      | Description                                                                       | Waste class |
|-----------|-----------------------------------------------------------------------------------|-------------|
| 08 01 11* | waste paint and varnish containing organic solvents or other hazardous substances | Hazardous   |

#### Type of waste:

HP3 Flammable, HP6 Acute Toxicity, HP4 Irritant — skin irritation and eye damage

#### Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance The Waste (England & Wales) Regulations 2011, 2011 No. 988. As under 15 01 of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-hazardous residue.

Waste should not be disposed of to drains. See paragraph 6.2.

#### Regulations related to waste management:

In accordance with Annex II of UK REACH the provisions related to waste management are stated:

## SECTION 13: DISPOSAL CONSIDERATIONS (continued)

UK legislation: The Waste (England & Wales) Regulations 2011.

## SECTION 14: TRANSPORT INFORMATION

### Transport of dangerous goods by land:

With regard to ADR 2023 and RID 2023:



#### 14.1 UN number:

UN1992

FLAMMABLE LIQUID, TOXIC, N.O.S. (Xylene; Toluene Diisocyanate)

#### 14.2 UN proper shipping name:

#### 14.3 Transport hazard class(es):

3

Labels:

3, 6.1

#### 14.4 Packing group:

III

#### 14.5 Environmental hazards:

No

#### 14.6 Special precautions for user

Tunnel restriction code:

D/E

Physico-Chemical properties:

see section 9

Limited quantities:

5 L

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:

Not relevant

### Transport of dangerous goods by sea:

With regard to IMDG 41-22:



#### 14.1 UN number:

UN1992

#### 14.2 UN proper shipping name:

FLAMMABLE LIQUID, TOXIC, N.O.S. (Xylene; Toluene Diisocyanate)

#### 14.3 Transport hazard class(es):

3

3, 6.1

Labels:

#### 14.4 Packing group:

III

#### 14.5 Marine pollutant:

No

#### 14.6 Special precautions for user

Special regulations:

274, 223

EmS Codes:

F-E, S-D

Physico-Chemical properties:

see section 9

Limited quantities:

5 L

Segregation group:

Not relevant

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:

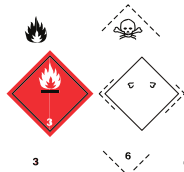
Not relevant

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## Transport of dangerous goods by air:

With regard to IATA/ICAO 2024:



### 14.1 UN number:

UN1992

FLAMMABLE LIQUID, TOXIC, N.O.S. (Xylene; Toluene Diisocyanate)

### 14.2 UN proper shipping name:

### 14.3 Transport hazard class(es):

3

Labels:

3, 6.1

### 14.4 Packing group:

III

### 14.5 Environmental hazards:

No

### 14.6 Special precautions for user

Physico-Chemical properties:

see section 9

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:

Not relevant

## SECTION 15: REGULATORY INFORMATION

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

## SECTION 15: REGULATORY INFORMATION (continued)

- Substances listed in UK candidate list of substances of very high concern (SVHCs): Not relevant
- Substances listed in UK REACH Authorisation List (Annex 14): Not relevant

### Accident Hazards Regulations 2015:

| Section | Description       | Lower-tier requirements | Upper-tier requirements |
|---------|-------------------|-------------------------|-------------------------|
| H2      | ACUTE TOXIC       | 50                      | 200                     |
| P5c     | FLAMMABLE LIQUIDS | 5000                    | 50000                   |

**Restrictions to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII UK REACH, etc ....):**

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## SECTION 15: REGULATORY INFORMATION (continued)

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,

—games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Contains more than 0.1 % of Toluene Diisocyanate by weight. 1. Shall not be used as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 August 2023, unless:

(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (b) the employer or selfemployed ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s).

2. Shall not be placed on the market as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 February 2022, unless:

(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (b) the supplier ensures that the recipient of the substance(s) or mixture(s) is provided with information on the requirements referred to in point (b) of paragraph 1 and the following statement is placed on the packaging, in a manner that is visibly distinct from the rest of the label information: "As from 24 August 2023 adequate training is required before industrial or professional use".

3. For the purpose of this entry "industrial and professional user(s)" means any worker or self-employed worker handling diisocyanates on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) or supervising these tasks.

4. The training referred to in point (b) of paragraph 1 shall include the instructions for the control of dermal and inhalation exposure to diisocyanates at the workplace without prejudice to any national occupational exposure limit value or other appropriate risk management measures at national level. Such training shall be conducted by an expert on occupational safety and health with competence acquired by relevant vocational training. That training shall cover as a minimum:

(a) the training elements in point (a) of paragraph 5 for all industrial and professional use(s).

(b) the training elements in points (a) and (b) of paragraph 5 for the following uses:

- handling open mixtures at ambient temperature (including foam tunnels)
- spraying in a ventilated booth
- application by roller
- application by brush
- application by dipping and pouring
- mechanical post treatment (e.g. cutting) of not fully cured articles which are not warm anymore — cleaning and waste
- any other uses with similar exposure through the dermal and/or inhalation route

(c) the training elements in points (a), (b) and (c) of paragraph 5 for the following uses:

- handling incompletely cured articles (e.g. freshly cured, still warm)
- foundry applications
- maintenance and repair that needs access to equipment
- open handling of warm or hot formulations (> 45 °C)
- spraying in open air, with limited or only natural ventilation (includes large industry working halls) and spraying with high energy (e.g. foams, elastomers)
- and any other uses with similar exposure through the dermal and/or inhalation route.

5. Training elements:

(a) general training, including on-line training, on:

- chemistry of diisocyanates
- toxicity hazards (including acute toxicity)
- exposure to diisocyanates
- occupational exposure limit values
- how sensitisation can develop
- odour as indication of hazard
- importance of volatility for risk
- viscosity, temperature, and molecular weight of diisocyanates
- personal hygiene
- personal protective equipment needed, including practical instructions for its correct use and its limitations
- risk of dermal contact and inhalation exposure
- risk in relation to application process used
- skin and inhalation protection scheme
- ventilation
- cleaning, leakages, maintenance
- discarding empty packaging
- protection of bystanders
- identification of critical handling stages

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**Adoseal - Polyurethane lacquer varnish**



- specific national code systems (if applicable)
- behaviour-based safety
- certification or documented proof that training has been successfully completed



- (b) intermediate level training, including on-line training, on:
- additional behaviour-based aspects
  - maintenance
  - management of change
  - evaluation of existing safety instructions
  - risk in relation to application process used
  - certification or documented proof that training has been successfully completed
- (c) advanced training, including on-line training, on:
- any additional certification needed for the specific uses covered
  - spraying outside a spraying booth
  - open handling of hot or warm formulations (> 45 °C)
  - certification or documented proof that training has been successfully completed
6. The training shall comply with the provisions set by the Member State in which the industrial or professional user(s) operate. Member States may implement or continue to apply their own national requirements for the use of the substance(s) or mixture (s), as long as the minimum requirements set out in paragraphs 4 and 5 are met.
7. The supplier referred to in point (b) of paragraph 2 shall ensure that the recipient is provided with training material and courses pursuant to paragraphs 4 and 5 in the official language(s) of the Member State(s) where the substance(s) or mixture(s) are supplied. The training shall take into consideration the specificity of the products supplied, including composition, packaging, and design.
8. The employer or self-employed shall document the successful completion of the training referred to in paragraphs 4 and 5. The training shall be renewed at least every five years.
9. Member States shall include in their reports pursuant to Article 117(1) the following information:
- (a) any established training requirements and other risk management measures related to the industrial and professional uses of diisocyanates foreseen in national law
  - (b) the number of cases of reported and recognised occupational asthma and occupational respiratory and dermal diseases in relation to diisocyanates
  - (c) national exposure limits for diisocyanates, if there are any
  - (d) information about enforcement activities related to this restriction.
10. This restriction shall apply without prejudice to other Union legislation on the protection of safety and health of workers at the workplace.

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

**Other legislation:**

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.  
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020.  
Control of Substances Hazardous to Health Regulations 2002 (as amended)  
EH40/2005 Workplace exposure limits.

## SECTION 16: OTHER INFORMATION

**Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with ANNEX II-The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.

**Texts of the legislative phrases mentioned in section 2:**

H315: Causes skin irritation.  
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H312: Harmful in contact with skin.  
H331: Toxic if inhaled.  
H226: Flammable liquid and vapour.

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

**GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):**



## SECTION 16: OTHER INFORMATION (continued)

Acute Tox. 2: H330 - Fatal if inhaled.  
Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled.  
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.  
Carc. 2: H351 - Suspected of causing cancer.  
Eye Irrit. 2: H319 - Causes serious eye irritation.  
Flam. Liq. 3: H226 - Flammable liquid and vapour.  
Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Skin Irrit. 2: H315 - Causes skin irritation.  
Skin Sens. 1: H317 - May cause an allergic skin reaction.  
STOT SE 3: H335 - May cause respiratory irritation.

### Classification procedure:

Skin Irrit. 2: Calculation method  
Resp. Sens. 1: Calculation method  
Acute Tox. 4: Calculation method  
Acute Tox. 3: Calculation method  
Flam. Liq. 3: Calculation method (2.6.4.3)

### Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product. **Principal bibliographical sources:**  
<http://echa.europa.eu> <http://eur-lex.europa.eu>

### Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road  
IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
LC50: Lethal Concentration 50  
EC50: Effective concentration 50  
LogPOW: Octanolwater partition coefficient  
Koc: Partition coefficient of organic carbon  
UFI: unique formula identifier  
IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at UK, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -