



## SAFETY DATA SHEET

### ARBO AR 240

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

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

##### 1.1. Product identifier

Product name	ARBO AR 240
Synonyms; trade names	ARBO AR 240 G, ARBO AR 240 H
Container size	750ml

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

Identified uses	Fire rated expanding polyurethane foam. Sealant. Insulator. Fixative. Filler.
Uses advised against	Restricted to professional users.

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

Supplier	Adshead Ratcliffe & Co. Ltd. Derby Road, Belper Derbyshire. DE56 1WJ T: (+44) 01773 826661 F: (+44) 01773 821215 E: sds.carlisle@ccm-europe.com
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##### 1.4. Emergency telephone number

Emergency telephone	NPIS (National Poisons Information Service): 0344 892 0111 (for medical professionals only). For medical advice, members of the public should contact NHS 111 in England: 111; NHS 24 in Scotland: 111; NHS Direct in Wales: 111 or 0845 4647. In Northern Ireland: contact your local GP or pharmacist.
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#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification (EC 1272/2008)

Physical hazards	Aerosol 1 - H222, H229
Health hazards	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 Lact. - H362 STOT SE 3 - H335 STOT RE 2 - H373
Environmental hazards	Aquatic Chronic 4 - H413

##### 2.2. Label elements

###### Hazard pictograms



Signal word

Danger

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<b>Hazard statements</b>	<p>H222 Extremely flammable aerosol.</p> <p>H229 Pressurised container: may burst if heated.</p> <p>H315 Causes skin irritation.</p> <p>H319 Causes serious eye irritation.</p> <p>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H351 Suspected of causing cancer.</p> <p>H362 May cause harm to breast-fed children.</p> <p>H335 May cause respiratory irritation.</p> <p>H373 May cause damage to organs through prolonged or repeated exposure if inhaled.</p> <p>H413 May cause long lasting harmful effects to aquatic life.</p>
<b>Precautionary statements</b>	<p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P211 Do not spray on an open flame or other ignition source.</p> <p>P251 Do not pierce or burn, even after use.</p> <p>P260 Do not breathe mist.</p> <p>P263 Avoid contact during pregnancy and while nursing.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P312 Call a POISON CENTRE/doctor if you feel unwell.</p> <p>P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.</p> <p>P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container in accordance with local regulations.</p>
<b>Supplemental label information</b>	<p>As from 24 August 2023 adequate training is required before industrial or professional use.</p> <p>RCH004a Persons already sensitised to diisocyanates may develop allergic reactions when using this product.</p> <p>RCH004b Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.</p> <p>RCH004c This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.</p>
<b>Contains</b>	Diphenylmethanediisocyanate, isomers and oligomerics, Alkanes, C14-17, chloro

### 2.3. Other hazards

Aerosol may explode under the effect of heat. Gas/vapour spreads at floor level: ignition hazard. May be ignited by sparks. This product contains alkanes, C14-17, chloro (medium-chain chlorinated paraffins; MCCP) which is considered to be PBT and vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>Dimethyl ether</b>		<b>10 - &lt;20%</b>
CAS number: 115-10-6	EC number: 204-065-8	REACH registration number: 01-2119472128-37-XXXX
<b>Classification</b>		
Flam. Gas 1A - H220		
Press. Gas (Liq.) - H280		

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<b>Reaction products of phosphoryl trichloride and 2-methyloxirane</b>		<b>10 - &lt;20%</b>
CAS number: 1244733-77-4	REACH registration number: 01-2119486772-26-XXXX	
<b>Classification</b>		
Acute Tox. 4 - H302 Aquatic Chronic 3 - H412		
<b>Diphenylmethanediisocyanate, isomers and oligomeric</b>		<b>10 - &lt;20%</b>
CAS number: 32055-14-4	EC number: 500-079-6	REACH registration number: 01-2119457024-46-XXXX
<b>Classification</b>		
Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373		
<b>Isobutane</b>		<b>5 - &lt;10%</b>
CAS number: 75-28-5	EC number: 200-857-2	REACH registration number: 01-2119485395-27-XXXX
<b>Classification</b>		
Flam. Gas 1A - H220 Press. Gas (Liq.) - H280		
<b>Alkanes, C14-17, chloro</b>		<b>1 - &lt;2.5%</b>
CAS number: 85535-85-9	EC number: 287-477-0	REACH registration number: 01-2119519269-33-XXXX
M factor (Acute) = 100	M factor (Chronic) = 10	
<b>Classification</b>		
Lact. - H362 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410		

The full text for all hazard statements is displayed in Section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

If in doubt, get medical attention promptly.

#### Inhalation

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues. In the event of any sensitisation symptoms developing, ensure further exposure is avoided.

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<b>Ingestion</b>	Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if any discomfort continues. Never give anything by mouth to an unconscious person.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues. In the event of any sensitisation symptoms developing, ensure further exposure is avoided.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes. If eye irritation persists: Get medical advice/attention.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves.

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

<b>General information</b>	May cause harm to breast-fed children. Pregnant or breastfeeding women should not work with this product if there is any risk of exposure.
<b>Inhalation</b>	Coughing, chest tightness, feeling of chest pressure. Upper respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Ingestion</b>	May cause irritation.
<b>Skin contact</b>	Allergic rash. Irritating to skin.
<b>Eye contact</b>	Causes serious eye irritation. Symptoms following overexposure may include the following: Redness. Pain.

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

<b>Notes for the doctor</b>	Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with the following media: Water spray, dry powder or carbon dioxide. Alcohol-resistant foam.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

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

<b>Specific hazards</b>	Extremely flammable aerosol. Containers can burst violently or explode when heated, due to excessive pressure build-up. In fire product may form: Toxic gases or vapours.
<b>Hazardous combustion products</b>	Heating may generate the following products: Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide (CO). Hydrogen chloride (HCl). Hydrogen cyanide (HCN). Oxides of nitrogen.

### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	Containers close to fire should be removed or cooled with water. Use water to keep fire exposed containers cool and disperse vapours. Avoid breathing fire gases or vapours. Keep up-wind to avoid fumes.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

## SECTION 6: Accidental release measures

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

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**Personal precautions** Avoid contact with skin, eyes and clothing. Avoid inhaling mists and vapours. Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Use suitable respiratory protection if ventilation is inadequate. No smoking, sparks, flames or other sources of ignition near spillage.

### 6.2. Environmental precautions

**Environmental precautions** Avoid the spillage or runoff entering drains, sewers or watercourses.

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

**Methods for cleaning up** Take up mechanically after hardening. When handling waste, the safety precautions applying to handling of the product should be considered.

### 6.4. Reference to other sections

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Keep away from heat, sparks and open flame. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level. Avoid contact with skin and eyes. Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Take precautionary measures against static discharges.

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

**Storage precautions** Store in a cool and well-ventilated place. Keep only in the original container. Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C. May explode when heated or when exposed to flames or sparks. Store away from the following materials:  
Oxidising materials.

### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2. Cleaning with aprotic polar solvents must be avoided.

## SECTION 8: Exposure controls/Personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### **Dimethyl ether**

Long-term exposure limit (8-hour TWA): WEL 400 ppm 766 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 500 ppm 958 mg/m<sup>3</sup>

##### **Diphenylmethanediisocyanate, isomers and oligomers**

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 0.07 mg/m<sup>3</sup>

as -NCO

Sen

##### **Isobutane**

Long-term exposure limit (8-hour TWA): 600 ppm 1450 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): 750 ppm 1810 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit.

Sen = Capable of causing occupational asthma.

#### Diphenylmethanediisocyanate, isomers and oligomers (CAS: 32055-14-4)

**Biological limit values** Isocyanates BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine.  
Sampling time: At the end of the period of exposure.

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<b>DNEL</b>	Workers - Inhalation; Long term local effects: 0.05 mg/m <sup>3</sup> Workers - Inhalation; Short term local effects: 0.1 mg/m <sup>3</sup>
<b>PNEC</b>	Fresh water; 3.7 µg/l Fresh water, Intermittent release; 0.37 µg/L marine water; 0.37 µg/L Sediment (Freshwater); 11.7 mg/kg Sediment (Marinewater); 1.17 mg/kg Soil; 2.33 mg/kg

### Reaction products of phosphoryl trichloride and 2-methyloxirane (CAS: 1244733-77-4)

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 8.2 mg/m <sup>3</sup> Workers - Inhalation; Short term systemic effects: 22.6 mg/m <sup>3</sup> Workers - Dermal; Long term systemic effects: 2.91 mg/kg/day
<b>PNEC</b>	Fresh water; 0.32 mg/l Fresh water, Intermittent release; 0.51 mg/l marine water; 0.032 mg/l STP; 19.1 mg/l Sediment (Freshwater); 11.5 mg/kg Sediment (Marinewater); 1.15 mg/kg Soil; 0.34 mg/kg Oral (food); 11.6 mg/kg food

### Alkanes, C14-17, chloro (CAS: 85535-85-9)

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 6.7 mg/m <sup>3</sup> Workers - Dermal; Long term systemic effects: 47.9 mg/kg/day
<b>PNEC</b>	- Fresh water; 1 µg/l - marine water; 0.2 µg/l - STP; 80 mg/l - Sediment (Freshwater); 13 mg/kg - Sediment (Marinewater); 2.6 mg/kg - Soil; 11.9 mg/kg Oral (food); 10 mg/kg food

## 8.2. Exposure controls

### Protective equipment



### Appropriate engineering controls

Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

### Eye/face protection

Safety glasses with side shields. Use eye protection conforming to EN 166. Personal protective equipment for eye and face protection should comply with European Standard EN166.

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<b>Hand protection</b>	Wear protective gloves. To protect hands from chemicals, gloves should comply with European Standard EN374. It is recommended that gloves are made of the following material: Suitable for short time use or protection against splashes: Butyl rubber/nitrile rubber gloves (> 0.1 mm) Contaminated gloves should be removed. Suitable for permanent exposure: Viton gloves (0.4 mm), breakthrough time >30 min. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.
<b>Other skin and body protection</b>	Wear appropriate clothing to prevent repeated or prolonged skin contact.
<b>Hygiene measures</b>	Do not smoke in work area. Wash after use and before eating, smoking and using the toilet. Promptly remove any clothing that becomes wet or contaminated.
<b>Respiratory protection</b>	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. organic vapour (Type A) and particulate filter A1: < 1000 ppm; A2: < 5000 ppm; A3: < 10000 ppm P1: Inert material; P2, P3: hazardous substances
<b>Environmental exposure controls</b>	Do not discharge into drains or watercourses or onto the ground.

### SECTION 9: Physical and chemical properties

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

<b>Appearance</b>	Aerosol. Foam.
<b>Colour</b>	Pink.
<b>Odour</b>	Slight.
<b>Odour threshold</b>	No information available.
<b>pH</b>	Not applicable. Reacts with water.
<b>Melting point</b>	No information available.
<b>Initial boiling point and range</b>	No information available.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	No information available.
<b>Evaporation factor</b>	No information available.
<b>Flammability (solid, gas)</b>	Extremely flammable aerosol.
<b>Upper/lower flammability or explosive limits</b>	No information available.
<b>Vapour pressure</b>	5100 hPa @ °C
<b>Vapour density</b>	No information available.
<b>Relative density</b>	No information available.
<b>Bulk density</b>	~ 1.0 g/cm <sup>3</sup> 23°C
<b>Solubility(ies)</b>	No information available.
<b>Partition coefficient</b>	No information available.

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<b>Auto-ignition temperature</b>	No information available.
<b>Decomposition Temperature</b>	No information available.
<b>Viscosity</b>	Not applicable.
<b>Explosive properties</b>	Aerosol may explode under the effect of heat.
<b>Oxidising properties</b>	Does not meet the criteria for classification as oxidising.

### 9.2. Other information

<b>Other information</b>	Not available.
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

<b>Reactivity</b>	Isocyanates react with water to liberate carbon dioxide. Any ingress of moisture into an isocyanate container, whether full or empty, can lead to a pressure build up and subsequent explosion.
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### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
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### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	May polymerize with many compounds e.g.: (strong) bases and amines. Reacts violently with (some) acids/bases.
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### 10.4. Conditions to avoid

<b>Conditions to avoid</b>	Avoid exposing aerosol containers to high temperatures or direct sunlight. Avoid heat, flames and other sources of ignition.
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### 10.5. Incompatible materials

<b>Materials to avoid</b>	Strong oxidising agents. Strong alkalis. Strong acids.
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### 10.6. Hazardous decomposition products

<b>Hazardous decomposition products</b>	Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Oxides of nitrogen. Hydrogen chloride (HCl). Hydrogen cyanide (HCN).
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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

<b>Summary</b>	Based on available data the classification criteria are not met.
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<b>ATE oral (mg/kg)</b>	4,213.33
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#### Acute toxicity - dermal

<b>Summary</b>	Based on available data the classification criteria are not met.
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#### Acute toxicity - inhalation

<b>Summary</b>	Based on available data the classification criteria are not met.
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<b>ATE inhalation (vapours mg/l)</b>	73.33
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#### Skin corrosion/irritation

<b>Skin corrosion/irritation</b>	Skin Irrit. 2 Causes skin irritation.
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#### Serious eye damage/irritation



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<b>Serious eye damage/irritation</b>	Eye Irrit. 2 Causes serious eye irritation.
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	Resp. Sens. 1 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Skin Sens. 1 May cause an allergic skin reaction.
<b><u>Germ cell mutagenicity</u></b>	
<b>Summary</b>	Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>Summary</b>	Carc. 2 Suspected of causing cancer.
<b><u>Reproductive toxicity</u></b>	
<b>Summary</b>	Lact. May cause harm to breast-fed children.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	STOT SE 3 - H335 May cause respiratory irritation.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	STOT RE 2 May cause damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not applicable.
<b><u>General information</u></b>	
<b>General information</b>	May cause harm to breast-fed children. Pregnant or breastfeeding women should not work with this product if there is any risk of exposure.
<b><u>Inhalation</u></b>	
<b>Inhalation</b>	May cause respiratory irritation. May cause sensitisation by inhalation. May cause inhalation hypersensitivity (occupational asthma) in sensitive individuals.
<b><u>Ingestion</u></b>	
<b>Ingestion</b>	Unlikely route of exposure.
<b><u>Skin contact</u></b>	
<b>Skin contact</b>	Irritating to skin. May cause an allergic skin reaction.
<b><u>Eye contact</u></b>	
<b>Eye contact</b>	Causes serious eye irritation.
<b><u>Acute and chronic health hazards</u></b>	
<b>Acute and chronic health hazards</b>	Repeated exposure may cause skin dryness or cracking. Suspected of causing cancer.
<b><u>Medical considerations</u></b>	
<b>Medical considerations</b>	Skin disorders and allergies. Chronic respiratory and obstructive airway diseases.

### Toxicological information on ingredients.

#### Reaction products of phosphoryl trichloride and 2-methyloxirane

##### Acute toxicity - oral

**Summary** Harmful if swallowed.

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 632.0

**Species** Rat

**ATE oral (mg/kg)** 632.0

##### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** LD<sub>50</sub> >2000 mg/kg, Oral, Rat

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### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** LC50 >7 mg/l, Inhalation, Rat

### Diphenylmethanediisocyanate, isomers and oligomers

### Acute toxicity - inhalation

**Summary** Harmful if inhaled.

**ATE inhalation (vapours mg/l)** 11.0

### Skin corrosion/irritation

**Skin corrosion/irritation** Causes skin irritation.

### Serious eye damage/irritation

**Serious eye damage/irritation** Causes serious eye irritation.

### Respiratory sensitisation

**Respiratory sensitisation** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

### Skin sensitisation

**Skin sensitisation** May cause an allergic skin reaction.

### Carcinogenicity

**Carcinogenicity** Suspected of causing cancer.

### Specific target organ toxicity - single exposure

**STOT - single exposure** May cause respiratory irritation.

**Target organs** Lungs

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** May cause damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.

### Alkanes, C14-17, chloro

### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 4,000.0

**Species** Rat

**ATE oral (mg/kg)** 4,000.0

### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 2,800.0

**Species** Rat

**ATE dermal (mg/kg)** 2,800.0

### Acute toxicity - inhalation

**Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l)** 48.17

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<b>Species</b>	Rat
<b>Notes (inhalation LC<sub>50</sub>)</b>	LC50 >48.17 mg/l, 1 hour, Vapour Rat
<b>ATE inhalation (vapours mg/l)</b>	48.17
<b><u>Reproductive toxicity</u></b>	
<b>Summary</b>	Lact. May cause harm to breast-fed children.
<b>Reproductive toxicity - development</b>	Developmental toxicity: - NOAEL: 100 mg/kg/day, Oral, Rabbit Maternal toxicity: - NOAEL: 100 mg/kg/day, Oral, Rabbit

### SECTION 12: Ecological information

#### 12.1. Toxicity

##### Acute aquatic toxicity

**Summary** Based on available data the classification criteria are not met.

##### Chronic aquatic toxicity

**Summary** Aquatic Chronic 4 May cause long lasting harmful effects to aquatic life. By analogy to a tested similar product.

#### Ecological information on ingredients.

##### Reaction products of phosphoryl trichloride and 2-methyloxirane

##### Acute aquatic toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 51 mg/l, Pimephales promelas (Fat-head Minnow)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 131 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 82 mg/l, Pseudokirchneriella subcapitata

##### Chronic aquatic toxicity

**Chronic toxicity - aquatic invertebrates** NOEC, 21 days: 32 mg/l, Daphnia magna

##### Diphenylmethanediisocyanate, isomers and oligomerics

##### Acute aquatic toxicity

**Acute toxicity - fish** LL<sub>50</sub>, 96 hours: >100 mg/l, Fish  
Read-across data.

**Acute toxicity - aquatic invertebrates** EL50, 48 hours: 3.7 mg/l, Daphnia magna  
Read-across data.

**Acute toxicity - aquatic plants** EL50, 72 hours: >100 mg/l, Algae  
Read-across data.

##### Chronic aquatic toxicity

**Chronic toxicity - aquatic invertebrates** NOEC, 21 days: >10 mg/l, Daphnia magna

##### Alkanes, C14-17, chloro

##### Acute aquatic toxicity

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<b>LE(C)<sub>50</sub></b>	0.001 < L(E)C <sub>50</sub> ≤ 0.01
<b>M factor (Acute)</b>	100
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: >5000 mg/l, Alburnus alburnus (Common bleak)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 0.006 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 96 hours: >3.2 mg/l, Selenastrum capricornutum
<b><u>Chronic aquatic toxicity</u></b>	
<b>NOEC</b>	0.001 < NOEC ≤ 0.01
<b>Degradability</b>	Non-rapidly degradable
<b>M factor (Chronic)</b>	10
<b>Chronic toxicity - fish early life stage</b>	NOEC, 14 days: >125 µg/l, Alburnus alburnus (Common bleak)
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: 0.01 mg/l, Daphnia magna

### 12.2. Persistence and degradability

**Persistence and degradability** No data available.

### Ecological information on ingredients.

#### Reaction products of phosphoryl trichloride and 2-methyloxirane

**Persistence and degradability** Not readily biodegradable.

#### Diphenylmethanediisocyanate, isomers and oligomers

**Biodegradation** - Degradation 0%: 28 days

#### Alkanes, C14-17, chloro

**Biodegradation** Water - Degradation 43% (Closed bottle test): 28 days  
Water - Degradation 63% (Closed bottle test): 60 days  
Water - Degradation 51 - 57%: 36 hours

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** No information available.

### Ecological information on ingredients.

#### Reaction products of phosphoryl trichloride and 2-methyloxirane

**Bioaccumulative potential** BCF: 0.8 - <14, Cyprinus carpio (Common carp)

#### Diphenylmethanediisocyanate, isomers and oligomers

**Bioaccumulative potential** Bioaccumulation is unlikely.

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### Alkanes, C14-17, chloro

**Bioaccumulative potential** BCF: 6660, Oncorhynchus mykiss (Rainbow trout) 35 days

**Partition coefficient** log Kow: 5.47-8.01

#### 12.4. Mobility in soil

**Mobility** The product is insoluble in water.

#### Ecological information on ingredients.

### Alkanes, C14-17, chloro

**Adsorption/desorption coefficient** Log Koc 5.0 - 5.2

#### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This product contains alkanes, C14-17, chloro (medium-chain chlorinated paraffins; MCCP) which is considered to be PBT and vPvB.

#### 12.6. Other adverse effects

**Other adverse effects** None known.

### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

**General information** Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. When handling waste, the safety precautions applying to handling of the product should be considered.

**Disposal methods** Empty containers must not be punctured or incinerated because of the risk of an explosion.

### **SECTION 14: Transport information**

#### 14.1. UN number

**UN No. (ADR/RID)** 1950

**UN No. (IMDG)** 1950

**UN No. (ICAO)** 1950

**UN No. (ADN)** 1950

#### 14.2. UN proper shipping name

**Proper shipping name (ADR/RID)** AEROSOLS

**Proper shipping name (IMDG)** AEROSOLS

**Proper shipping name (ICAO)** AEROSOLS

**Proper shipping name (ADN)** AEROSOLS

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

**ADR/RID class** 2.1

**ADR/RID classification code** 5F

**ADR/RID label** 2.1

**IMDG class** 2.1

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ICAO class/division 2.1

ADN class 2.1

### Transport labels



### 14.4. Packing group

Not applicable.

### 14.5. Environmental hazards

#### Environmentally hazardous substance/marine pollutant

No.

### 14.6. Special precautions for user

EmS F-D, S-U

ADR transport category 2

Tunnel restriction code (D)

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

## SECTION 15: Regulatory information

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

<b>National regulations</b>	<p>The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, UK SI 2019/720. The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020, UK SI 2020/1567.</p> <p>The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).</p> <p>The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, UK SI 2019/758, UK SI 2019/858 and UK SI 2019/1144. The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, UK SI 2020/1577.</p> <p>Health and Safety at Work etc. Act 1974 (as amended).</p> <p>The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].</p>
<b>EU legislation</b>	<p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).</p> <p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).</p>
<b>Health and environmental listings</b>	<p>EU Candidate List of Substances of Very High Concern (SVHCs) for Authorisation: Alkanes, C14-17, chloro (medium-chain chlorinated paraffins; M CCP) which is considered to be PBT and vPvB.</p>
<b>Restrictions (Annex XVII Regulation 1907/2006)</b>	<p>Entry number: 74</p>

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**Seveso Directive - Control of major accident hazards** P3a Lower-tier 150 tonnes Upper-tier 500 tonnes.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the mixture.

### SECTION 16: Other information

#### **Abbreviations and acronyms used in the safety data sheet**

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.  
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
ATE: Acute Toxicity Estimate.  
BCF: Bioconcentration Factor.  
CAS: Chemical Abstracts Service.  
DNEL: Derived No Effect Level.  
EC<sub>50</sub>: 50% of maximal Effective Concentration.  
IATA: International Air Transport Association.  
IBC: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).  
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.  
IMDG: International Maritime Dangerous Goods.  
Kow: Octanol-water partition coefficient.  
LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.  
LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).  
LOAEC: Lowest Observed Adverse Effect Concentration.  
LOAEL: Lowest Observed Adverse Effect Level.  
LOEC: Lowest Observed Effect Concentration.  
MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.  
NOAEC: No Observed Adverse Effect Concentration.  
NOAEL: No Observed Adverse Effect Level.  
NOEC: No Observed Effect Concentration.  
PBT: Persistent, Bioaccumulative and Toxic substance.  
PNEC: Predicted No Effect Concentration.  
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.  
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.  
SVHC: Substances of Very High Concern.  
vPvB: Very Persistent and Very Bioaccumulative.

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<b>Classification abbreviations and acronyms</b>	Acute Tox. = Acute toxicity Aerosol = Aerosol Aquatic Acute = Hazardous to the aquatic environment (acute) Aquatic Chronic = Hazardous to the aquatic environment (chronic) Carc. = Carcinogenicity Eye Irrit. = Eye irritation Flam. Gas = Flammable gas Lact. = Reproductive toxicity: effects on or via lactation Press. Gas (Liq.) = Gas under pressure: Liquefied gas Resp. Sens. = Respiratory sensitisation Skin Irrit. = Skin irritation Skin Sens. = Skin sensitisation STOT RE = Specific target organ toxicity-repeated exposure STOT SE = Specific target organ toxicity-single exposure
<b>Key literature references and sources for data</b>	Raw material suppliers SDS. Source: European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
<b>Classification procedures according to Regulation (EC) 1272/2008</b>	Aerosol 1 - H222, H229, Carc. 2 - H351, Eye Irrit. 2 - H319, Lact. - H362, Resp. Sens. 1 - H334, Skin Irrit. 2 - H315, Skin Sens. 1 - H317, STOT RE 2 - H373, STOT SE 3 - H335: Calculation method. Aquatic Chronic 4 - H413: Bridging principle (Substantially similar mixtures).
<b>Revision comments</b>	Revised sections: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16.
<b>Revision date</b>	30/06/2022
<b>Revision</b>	2
<b>Supersedes date</b>	15/05/2017
<b>SDS number</b>	10114
<b>SDS status</b>	Approved.
<b>Hazard statements in full</b>	H220 Extremely flammable gas. H222 Extremely flammable aerosol. H229 Pressurised container: may burst if heated. H280 Contains gas under pressure; may explode if heated. H302 Harmful if swallowed. 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. H362 May cause harm to breast-fed children. H373 May cause damage to organs through prolonged or repeated exposure if inhaled. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects. H413 May cause long lasting harmful effects to aquatic life.

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