

# SAFETY DATA SHEET

**ARBO**

ARBO® AR 240 Fire Rated Foam

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

### 1.1 Product identifier

**Product name** : ARBO® AR 240 Fire Rated Foam  
**Product description** : Fire rated expanding polyurethane foam. Sealant. Insulator. Fixative. Filler  
**Other means of identification** : AR 240 Gun Grade, AR 240 Hand Grade

### 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	Reason
For professional users only.	-

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

Adshead Ratcliffe & Co. Ltd.  
 Derby Road, Belper  
 Derbyshire.  
 DE56 1WJ  
 +44 (0)1773 826661

**e-mail address of person responsible for this SDS** : SDSQueries@carlisleccm.com

### 1.4 Emergency telephone number

#### National advisory body/Poison Centre

**Telephone number** : National Poisons Information Service (NPIS)  
 Tel: 0344 892 0111 (for healthcare professionals only)  
 Website: <http://www.npis.org/>  
 Members of Public in England, Scotland and Wales can contact NHS 111/NHS 24 by dialling 111. In Northern Ireland contact your local GP.

#### Supplier

**Telephone number** : +44 (0)1773 826661  
 (Office hours: 8.30 - 17.00)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to UK CLP/GHS

Aerosol 1, H222, H229  
 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  
 Aquatic Chronic 4, H413

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.  
 See Section 16 for the full text of the H statements declared above.

## SECTION 2: Hazards identification

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

#### Hazard pictograms



#### Signal word

: Danger

#### Hazard statements

: H222, H229 - Extremely flammable aerosol. Pressurised container: may burst if heated.  
 H315 - Causes skin irritation.  
 H317 - May cause an allergic skin reaction.  
 H319 - Causes serious eye irritation.  
 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.  
 H413 - May cause long lasting harmful effects to aquatic life.

#### Precautionary statements

##### Prevention

: P202 - Do not handle until all safety precautions have been read and understood.  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P211 - Do not spray on an open flame or other ignition source.  
 P260 - Do not breathe mist.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P263 - Avoid contact during pregnancy and while nursing.  
 P251 - Do not pierce or burn, even after use.  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.

##### Response

: P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P312 - Call a POISON CENTER or doctor if you feel unwell.  
 P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

##### Storage

: P405 - Store locked up.  
 P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

##### Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

#### Supplemental label elements

: Not applicable.

#### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

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

#### Special packaging requirements

##### Containers to be fitted with child-resistant fastenings

: Not applicable.

##### Tactile warning of danger

: Not applicable.

### 2.3 Other hazards

ARBO® AR 240 Fire Rated Foam

## SECTION 2: Hazards identification

- Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture contains substances that are assessed to be a PBT or a vPvB, refer to Section 3.2.
- Other hazards which do not result in classification** : The vapour/gas is heavier than air and will spread along the ground.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
reaction products of phosphoryl trichloride and 2-methyloxirane	REACH #: 01-2119486772-26 CAS: 1244733-77-4	≥10 - <20	Acute Tox. 4, H302 Aquatic Chronic 3, H412	[1]
diphenylmethanediisocyanate, isomers and oligomeric	REACH #: 01-2119457024-46 EC: 500-079-6 CAS: 32055-14-4	≥10 - <20	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 (respiratory system) (inhalation)	[1] [2]
dimethyl ether	REACH #: 01-2119472128-37 EC: 204-065-8 CAS: 115-10-6 Index: 603-019-00-8	≥10 - <20	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	[2]
alkanes, C14-17, chloro	REACH #: 01-2119519269-33 EC: 287-477-0 CAS: 85535-85-9 Index: 602-095-00-X	≥1 - <2.5	Lact., H362 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=10) EUH066 <b>See Section 16 for the full text of the H statements declared above.</b>	[1] [3] [4]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

### Type

- [1] Substance classified with a health or environmental hazard  
 [2] Substance with a workplace exposure limit  
 [3] Substance meets the criteria for PBT  
 [4] Substance meets the criteria for vPvB

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

## SECTION 4: First aid measures

- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting

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

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : In case of fire, use water spray (fog), foam, dry chemical or CO<sub>2</sub>.

**Unsuitable extinguishing media** : Do not use water jet.

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

**Hazards from the substance or mixture** : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

**Hazardous combustion products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 nitrogen oxides  
 phosphorus oxides  
 halogenated compounds  
 hydrogen cyanide  
 Hydrogen chloride

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: Accidental release measures

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

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## SECTION 6: Accidental release measures

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitisation problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Pressurised container: protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid contact during pregnancy or while nursing. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

#### Seveso Directive - Reporting thresholds

##### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P3a	150 tonne	500 tonne

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
diphenylmethanediisocyanate, isomers and oligomeric	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). [isocyanates, all, except methyl isocyanate as -NCO] Inhalation sensitiser.</b> STEL: 0.07 mg/m <sup>3</sup> , (as -NCO) 15 minutes. TWA: 0.02 mg/m <sup>3</sup> , (as -NCO) 8 hours.
dimethyl ether	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> STEL: 958 mg/m <sup>3</sup> 15 minutes. STEL: 500 ppm 15 minutes. TWA: 400 ppm 8 hours. TWA: 766 mg/m <sup>3</sup> 8 hours.

#### Biological exposure indices

Product/ingredient name	Exposure indices
diphenylmethanediisocyanate, isomers and oligomeric	<b>EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Isocyanates]</b> BMGV: 1 µmol/mol creatinine, diamine [in urine]. Sampling time: post task.

**Recommended monitoring procedures** : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
reaction products of phosphoryl trichloride and 2-methyloxirane	DNEL	Long term Oral	0.52 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	1.04 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	1.45 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Oral	2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	2.91 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	5.6 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	8.2 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	22.6 mg/m <sup>3</sup>	Workers	Systemic
diphenylmethanediisocyanate, isomers and oligomeric	DNEL	Long term Inhalation	0.025 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	0.05 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	0.05 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	0.1 mg/m <sup>3</sup>	Workers	Local
dimethyl ether	DNEL	Long term Inhalation	471 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	1894 mg/m <sup>3</sup>	Workers	Systemic
alkanes, C14-17, chloro	DNEL	Long term Oral	0.58 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	2 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	6.7 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	28.75 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	47.9 mg/	Workers	Systemic



## SECTION 8: Exposure controls/personal protection

kg bw/day

### PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail	
reaction products of phosphoryl trichloride and 2-methyloxirane	Fresh water	0.32 mg/l	-	
	Fresh water	0.51 mg/l	-	
	Marine water	0.032 mg/l	-	
	Sewage Treatment Plant	19.1 mg/l	-	
	Fresh water sediment	11.5 mg/kg dwt	-	
	Marine water sediment	1.15 mg/kg dwt	-	
	Soil	0.34 mg/kg dwt	-	
	Secondary Poisoning	11.6 mg/kg	-	
	diphenylmethanediisocyanate, isomers and oligomeric	Fresh water	3.7 µg/l	-
		Fresh water	37 µg/l	-
Marine water		0.37 µg/l	-	
Fresh water sediment		11.7 mg/kg dwt	-	
Marine water sediment		1.17 mg/kg dwt	-	
Soil		2.33 mg/kg dwt	-	
alkanes, C14-17, chloro		Fresh water	1 µg/l	-
		Marine water	0.2 µg/l	-
		Sewage Treatment Plant	80 mg/l	-
		Fresh water sediment	13 mg/kg dwt	-
	Marine water sediment	2.6 mg/kg dwt	-	
	Soil	11.9 mg/kg dwt	-	
	Secondary Poisoning	10 mg/kg	-	

### 8.2 Exposure controls

#### Appropriate engineering controls

- : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

#### Individual protection measures

##### Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

##### Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields

#### Skin protection

##### Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.  
Viton®  
thickness 0.4 mm  
>30 minutes (breakthrough time)



**SECTION 8: Exposure controls/personal protection**

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapour (Type A) and particulate filter
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

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

- Physical state** : Liquid. [Aerosol.]
- Colour** : Pink
- Odour** : Slight
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Not available.
- Flash point** : Not applicable.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : Not applicable.
- Viscosity** : Not available.
- Solubility in water** : Product reacts with water.
- Partition coefficient: n-octanol/ water** : Not applicable.
- Vapour pressure** : 510 kPa (3825.314 mm Hg)
- Relative density** : Not available.
- Density** : 1 g/cm<sup>3</sup> [23°C (73.4°F)]
- Vapour density** : Not available.
- Explosive properties** : Not available.
- Oxidising properties** : Not available.
- Particle characteristics
- Median particle size** : Not applicable.

**9.2 Other information**

- Heat of combustion** : 9.461 kJ/g
- Aerosol product
- Type of aerosol** : Foam

**SECTION 10: Stability and reactivity**

- 10.1 Reactivity** : 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.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).  
Keep away from heat and direct sunlight.
- 10.5 Incompatible materials** : oxidising materials  
strong alkalis  
strong acids
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.  
Decomposition products may include the following materials:  
carbon oxides  
nitrogen oxides  
hydrogen cyanide  
hydrogen chloride

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
dimethyl ether	LC50 Inhalation Gas.	Rat	164000 ppm	4 hours
	LC50 Inhalation Vapour	Rat	309 g/m <sup>3</sup>	4 hours

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**Acute toxicity estimates**

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
ARBO® AR 240 Fire Rated Foam	3334.4	N/A	N/A	73.4	N/A
reaction products of phosphoryl trichloride and 2-methyloxirane	500	N/A	N/A	N/A	N/A
diphenylmethanediisocyanate, isomers and oligomeric	N/A	N/A	N/A	11	N/A
dimethyl ether	N/A	N/A	164000	309	N/A

**Irritation/Corrosion****Conclusion/Summary**

- Skin** : Skin Irrit. 2
- Eyes** : Eye Irrit. 2
- Respiratory** : STOT SE 3 respiratory tract irritation

**Sensitisation****Conclusion/Summary**

- Skin** : Skin Sens. 1
- Respiratory** : Resp. Sens. 1

**Mutagenicity**

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

## SECTION 11: Toxicological information

### Carcinogenicity

**Conclusion/Summary** : Carc. 2

### Reproductive toxicity

**Conclusion/Summary** : Lact. May cause harm to breast-fed children.

### Teratogenicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
diphenylmethanediisocyanate, isomers and oligomeric	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
diphenylmethanediisocyanate, isomers and oligomeric	Category 2	inhalation	respiratory system

### Aspiration hazard

Not available.

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.

**Ingestion** : No known significant effects or critical hazards.

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

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness

**Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting

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

#### Short term exposure

**Potential immediate effects** : Irritating to eyes, respiratory system and skin.  
May cause skin sensitisation.  
Respiratory sensitisation

**Potential delayed effects** : May cause skin sensitisation.  
Respiratory sensitisation

#### Long term exposure

**SECTION 11: Toxicological information**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

**Conclusion/Summary** : Not available.

**General** : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : May cause harm to breast-fed children.

**Other information** : Not available.

**SECTION 12: Ecological information****12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
alkanes, C14-17, chloro	Acute EC50 0.0059 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Chronic NOEC 0.0087 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days

**Conclusion/Summary** : Aquatic Chronic 4 Bridging principle "Substantially similar mixtures"

**12.2 Persistence and degradability**

**Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
alkanes, C14-17, chloro	-	-	Not readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
diphenylmethanediisocyanate, isomers and oligomeric	4.51	200	Low
dimethyl ether	0.07	-	Low
alkanes, C14-17, chloro	4.7 to 8.3	10500 to 14600	High

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
reaction products of phosphoryl trichloride and 2-methyloxirane	No	N/A	N/A	No	N/A	N/A	N/A
diphenylmethanediisocyanate, isomers and oligomeric	No	N/A	No	Yes	No	N/A	No
dimethyl ether	No	N/A	N/A	No	N/A	N/A	N/A
alkanes, C14-17, chloro	Yes	Yes	Yes	Yes	Yes	Yes	Yes

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.





**Hazardous waste** : Yes.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	UN1950	UN1950	UN1950	UN1950
<b>14.2 UN proper shipping name</b>	AEROSOLS	AEROSOLS	AEROSOLS	Aerosols, flammable
<b>14.3 Transport hazard class(es)</b>	2 	2 	2.1 	2.1 
<b>14.4 Packing group</b>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.

#### Additional information

**ADR/RID** : **Limited quantity** 1 L  
**Special provisions** 190, 327, 625, 344  
**Tunnel code** (D)

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

ARBO® AR 240 Fire Rated Foam

## SECTION 15: Regulatory information

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

#### UK (GB)/REACH

##### Annex XIV - List of substances subject to authorisation

###### Annex XIV

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

###### Ozone depleting substances

Not listed.

###### Prior Informed Consent (PIC)

Not listed.

###### Persistent Organic Pollutants

Not listed.

#### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
ARBO® AR 240 Fire Rated Foam	≥90	3 74

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

**Aerosol dispensers** :

**UK  
CA**



Extremely flammable

#### Seveso Directive

This product is controlled under the Seveso Directive.

#### Danger criteria

Category
P3a

#### EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Not listed

#### International regulations

##### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

##### Montreal Protocol



## SECTION 15: Regulatory information

Not listed.

### Stockholm Convention on Persistent Organic Pollutants

Not listed.

### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: Not determined.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: Not determined.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: Not determined.
<b>Viet Nam</b>	: All components are listed or exempted.
<b>15.2 Chemical safety assessment</b>	: This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	: ATE = Acute Toxicity Estimate GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = GB CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number SGG = Segregation Group vPvB = Very Persistent and Very Bioaccumulative
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### Procedure used to derive the classification

Classification	Justification
Aerosol 1, H222, H229 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 Aquatic Chronic 4, H413	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Bridging principle "Substantially similar mixtures"

**SECTION 16: Other information****Full text of abbreviated H statements**

H220	Extremely flammable gas.
H222, H229	Extremely flammable aerosol. 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.
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.
EUH066	Repeated exposure may cause skin dryness or cracking.

**Full text of classifications**

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aerosol 1	AEROSOLS - Category 1
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Carc. 2	CARCINOGENICITY - Category 2
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Gas 1A	FLAMMABLE GASES - Category 1A
Lact.	REPRODUCTIVE TOXICITY - Effects on or via lactation
Press. Gas (Comp.)	GASES UNDER PRESSURE - Compressed gas
Resp. Sens. 1	RESPIRATORY SENSITISATION - Category 1
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.