

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878

## SAFETY DATA SHEET

FR2-55 TUK BLACK RAL 9011

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

#### 1.1 Product identifier

**Product name** : FR2-55 TUK BLACK RAL 9011  
**SDS code** : 55909011K

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

Identified uses
Paint. Professional use Industrial use
Uses advised against
All other uses

**Product use** : Waterborne coating for interior use.

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

MAPAERO SAS  
 10, Avenue de la Rijole CS30098  
 09103 PAMIERS Cedex  
 France

**e-mail address of person responsible for this SDS** : PSRA\_PAMIERS@akzonobel.com

#### 1.4 Emergency telephone number

##### National advisory body/Poison Center

**Telephone number** : +44 (0)344 892 0111

##### Supplier

**Telephone number** : +33 (0)5 34 01 34 01  
 +33 (0)5 61 60 23 30

**Hours of operation** :

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226  
 Skin Sens. 1, H317

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

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

#### 2.2 Label elements

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**SECTION 2: Hazards identification****Hazard pictograms** :**Signal word** :

Warning

**Hazard statements** :Flammable liquid and vapor.  
May cause an allergic skin reaction.**Precautionary statements****Prevention** :

Wear protective gloves. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing vapor.

**Response** :

Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention.

**Storage** :

Store in a well-ventilated place. Keep cool.

**Disposal** :

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

**Hazardous ingredients** :Polyisocyanate, aliphatic  
C(M)IT/MIT(3:1)**Supplemental label elements** :

Contains isocyanates. May produce an allergic reaction.

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

Not applicable.

**Special packaging requirements****Containers to be fitted with child-resistant fastenings** :

Not applicable.

**Tactile warning of danger** :

Not applicable.

**2.3 Other hazards****Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** :

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** :

None known.

**SECTION 3: Composition/information on ingredients****3.2 Mixtures** :

Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris(6-isocyanatoethyl)-, reaction products with polyethylene glycol monomethyl ether	CAS: 129217-88-5	≤10	Aquatic Chronic 3, H412	[1]
2-ethoxy-1-methylethyl acetate	EC: 259-370-9 CAS: 54839-24-6 Index: 603-177-00-8	≤10	Flam. Liq. 3, H226 STOT SE 3, H336	[1]
Polyisocyanate, aliphatic	-	≤3	Skin Sens. 1, H317	[1]
2-butoxyethanol	REACH #:	<1	Acute Tox. 4, H302	[1] [2]

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### SECTION 3: Composition/information on ingredients

4-isocyanatosulphonyltoluene	01-2119475108-36 EC: 203-905-0 CAS: 111-76-2 Index: 603-014-00-0 EC: 223-810-8 CAS: 4083-64-1 Index: 615-012-00-7	≤0.3	Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 STOT SE 3, H335 EUH014	[1] [2]
C(M)IT/MIT(3:1)	REACH #: 01-2120764691-48 CAS: 55965-84-9 Index: 613-167-00-5	≤0.001	Acute Tox. 3, H301 Acute Tox. 2, H310 Acute Tox. 2, H330 Skin Corr. 1C, H314 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100) EUH071	[1]
1,4-dioxane	EC: 204-661-8 CAS: 123-91-1 Index: 603-024-00-5	<0.1	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Carc. 1B, H350 STOT SE 3, H335 EUH019 EUH066	[1] [2]
ethylene oxide	EC: 200-849-9 CAS: 75-21-8 Index: 603-023-00-X	<0.1	Flam. Gas 1A, H220 Press. Gas (Comp.), H280 Acute Tox. 3, H301 Acute Tox. 3, H331 Skin Corr. 1, H314 Muta. 1B, H340 Carc. 1B, H350 Repr. 1B, H360Fd STOT SE 3, H335 STOT SE 3, H336 STOT RE 1, H372 (nervous system)	[1] [2]
ammonia, anhydrous	EC: 231-635-3 CAS: 7664-41-7 Index: 007-001-00-5	<0.1	Flam. Gas 2, H221 Press. Gas (Comp.), H280 Acute Tox. 3, H331 Skin Corr. 1B, H314 Aquatic Acute 1, H400 (M=1)	[1] [2]
chlorobenzene	REACH #: 01-2119432722-45 EC: 203-628-5 CAS: 108-90-7 Index: 602-033-00-1	≤0.1	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Aquatic Chronic 2, H411  <b>See Section 16 for the full text of the H statements declared above.</b>	[1] [2]

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

## SECTION 3: Composition/information on ingredients

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

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 if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 adverse health effects persist or are severe. 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.
- 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 if adverse health effects persist or are severe. 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. 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

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability.

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## SECTION 4: First aid measures

Repeated or prolonged contact with irritants may cause dermatitis.

Contains Polyisocyanate, aliphatic, 4-isocyanatosulphonyltoluene, C(M)IT/MIT(3:1). May produce an allergic reaction.

### Over-exposure signs/symptoms

<b>Eye contact</b>	: No specific data.
<b>Inhalation</b>	: No specific data.
<b>Skin contact</b>	: Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	: No specific data.

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

<b>Notes to physician</b>	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
<b>Unsuitable extinguishing media</b>	: Do not use water jet.

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

<b>Hazards from the substance or mixture</b>	: Flammable liquid and vapor. 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.
<b>Hazardous combustion products</b>	: Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides

### 5.3 Advice for firefighters

<b>Special protective actions for fire-fighters</b>	: 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.
<b>Special protective equipment for fire-fighters</b>	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

<b>For non-emergency personnel</b>	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
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## SECTION 6: Accidental release measures

**For emergency responders** : If specialized 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 spilled 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 materials 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.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

**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 sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**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 in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

#### Seveso Directive - Reporting thresholds

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## SECTION 7: Handling and storage

### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne

### 7.3 Specific end use(s)

**Recommendations** : Not available.

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

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
2-butoxyethanol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> STEL: 50 ppm 15 minutes. TWA: 25 ppm 8 hours. STEL: 246 mg/m <sup>3</sup> 15 minutes. TWA: 123 mg/m <sup>3</sup> 8 hours.
4-isocyanatosulphonyltoluene	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Inhalation sensitizer.</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.
1,4-dioxane	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> TWA: 73 mg/m <sup>3</sup> 8 hours. TWA: 20 ppm 8 hours.
ethylene oxide	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> TWA: 1 ppm 8 hours. TWA: 1.8 mg/m <sup>3</sup> 8 hours.
ammonia, anhydrous	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> STEL: 25 mg/m <sup>3</sup> 15 minutes. Form: anhydrous STEL: 35 ppm 15 minutes. Form: anhydrous TWA: 18 mg/m <sup>3</sup> 8 hours. Form: anhydrous TWA: 25 ppm 8 hours. Form: anhydrous
chlorobenzene	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> STEL: 3 ppm 15 minutes. TWA: 1 ppm 8 hours. TWA: 4.7 mg/m <sup>3</sup> 8 hours. STEL: 14 mg/m <sup>3</sup> 15 minutes.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment

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

of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) 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	
2-ethoxy-1-methylethyl acetate	DNEL	Long term Oral	13.1 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	62 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	103 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	181 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	302 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	365 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Inhalation	608 mg/m <sup>3</sup>	Workers	Systemic	
2-butoxyethanol	DNEL	Long term Oral	6.3 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Oral	26.7 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	59 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Dermal	75 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	89 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	89 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	98 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Dermal	125 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	147 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	246 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	426 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Inhalation	1091 mg/m <sup>3</sup>	Workers	Systemic	
	4-isocyanatosulphonyltoluene	DNEL	Long term Oral	0.46 mg/kg bw/day	General population	Systemic
		DNEL	Long term Dermal	0.46 mg/kg bw/day	General population	Systemic
DNEL		Long term Inhalation	0.8 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Dermal	0.92 mg/kg bw/day	Workers	Systemic	
DNEL		Long term Inhalation	3.24 mg/m <sup>3</sup>	Workers	Systemic	
1,4-dioxane	DNEL	Long term Oral	0.24 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	12 mg/kg bw/day	General population	Systemic	
	DNEL	Long term	18.25 mg/	General	Systemic	

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ammonia, anhydrous	DNEL	Inhalation Long term Dermal	m <sup>3</sup> 21 mg/kg bw/day	population Workers	Systemic	
	DNEL	Short term Inhalation	72 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	73 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	144 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Inhalation	2.8 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Oral	6.8 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Oral	6.8 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	6.8 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Dermal	6.8 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	7.2 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	14 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	16 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	23.8 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	23.8 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Inhalation	47.6 mg/m <sup>3</sup>	Workers	Systemic	
	chlorobenzene	DNEL	Long term Inhalation	47.6 mg/m <sup>3</sup>	Workers	Systemic
		DNEL	Short term Dermal	68 mg/kg bw/day	General population	Systemic
DNEL		Long term Dermal	68 mg/kg bw/day	General population	Systemic	
DNEL		Short term Inhalation	1 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Inhalation	1 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Short term Oral	3 mg/kg bw/day	General population	Systemic	
DNEL		Long term Oral	3 mg/kg bw/day	General population	Systemic	
DNEL		Short term Dermal	3 mg/kg bw/day	General population	Systemic	
DNEL		Long term Dermal	3 mg/kg bw/day	General population	Systemic	
DNEL		Long term Dermal	5 mg/kg bw/day	Workers	Systemic	
DNEL		Short term Dermal	15 mg/kg bw/day	Workers	Systemic	
DNEL	Long term Inhalation	23 mg/m <sup>3</sup>	Workers	Systemic		
DNEL	Short term Inhalation	70 mg/m <sup>3</sup>	Workers	Systemic		

### PNECs

No PNECs available.

## SECTION 8: Exposure controls/personal protection

### 8.2 Exposure controls

**Appropriate engineering controls** : Use only with adequate ventilation. 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, vapor 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.

When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time >480 minutes according to EN374) is recommended. Recommended gloves: Viton ® or Nitrile, thickness ≥ 0.38 mm. When only brief contact is expected, a glove with protection class of 2 or higher (breakthrough time >30 minutes according to EN374) is recommended. Recommended gloves: Nitrile, thickness ≥ 0.12 mm.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

**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. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

**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.

## SECTION 8: Exposure controls/personal protection

**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

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Physical state** : Liquid.  
**Color** : Black.  
**Odor** : Characteristic.  
**Odor threshold** : Not available.  
**pH** : Not available.  
**Melting point/freezing point** : Not available.  
**Initial boiling point and boiling range** : Not available.  
**Flash point** : Closed cup: 59°C  
**Evaporation rate** : Not available.  
**Flammability (solid, gas)** : Not available.  
**Upper/lower flammability or explosive limits** : Not available.  
**Vapor pressure** : Not available.  
**Vapor density** : Highest known value: >1 (Air = 1) (Oxirane, 2-methyl-, polymer with oxirane, monobutyl ether). Weighted average: 1.17 (Air = 1)  
**Density** : 1.158 g/cm<sup>3</sup>  
**Solubility(ies)** : Insoluble in the following materials: cold water.  
**Partition coefficient: n-octanol/water** : Not available.  
**Auto-ignition temperature** : Not available.  
**Decomposition temperature** : Not available.  
**Viscosity** : Kinematic (room temperature): 0.78 cm<sup>2</sup>/s  
 Kinematic (40°C): 1.01 cm<sup>2</sup>/s

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.  
**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). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.  
**10.5 Incompatible materials** : Reactive or incompatible with the following materials:  
 oxidizing materials  
**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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

Product/ingredient name	Result	Species	Dose	Exposure
2-butoxyethanol	LC50 Inhalation Gas.	Mouse	700 ppm	7 hours
	LC50 Inhalation Gas.	Rat	450 ppm	4 hours
	LC50 Inhalation Vapor	Mouse	3380 mg/m <sup>3</sup>	7 hours
	LC50 Inhalation Vapor	Rat	2900 mg/m <sup>3</sup>	7 hours
	LD50 Dermal	Guinea pig	230 uL/kg	-
	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Intraperitoneal	Mouse	536 mg/kg	-
	LD50 Intraperitoneal	Rabbit	220 mg/kg	-
	LD50 Intraperitoneal	Rat	220 mg/kg	-
	LD50 Intravenous	Mouse	1130 mg/kg	-
	LD50 Intravenous	Rabbit	252 mg/kg	-
	LD50 Intravenous	Rat	307 mg/kg	-
	LD50 Oral	Guinea pig	1200 mg/kg	-
	LD50 Oral	Mouse	1230 mg/kg	-
	LD50 Oral	Mouse	1167 mg/kg	-
	LD50 Oral	Rabbit	300 mg/kg	-
	LD50 Oral	Rabbit	320 mg/kg	-
	LD50 Oral	Rat	917 mg/kg	-
	LD50 Oral	Rat	250 mg/kg	-
	LD50 Route of exposure unreported	Mouse	1050 mg/kg	-
LD50 Route of exposure unreported	Rat	917 mg/kg	-	
4-isocyanatosulphonyltoluene	LD50 Intraperitoneal	Rat	775 mg/kg	-
	LD50 Oral	Rat	2234 mg/kg	-
1,4-dioxane	LC50 Inhalation Vapor	Mouse	37 g/m <sup>3</sup>	2 hours
	LC50 Inhalation Vapor	Rat	46 g/m <sup>3</sup>	2 hours
	LD50 Dermal	Rabbit	7600 uL/kg	-
	LD50 Intraperitoneal	Mouse	790 mg/kg	-
	LD50 Intraperitoneal	Rat	799 mg/kg	-
	LD50 Oral	Guinea pig	3150 mg/kg	-
	LD50 Oral	Mouse	5300 mg/kg	-
	LD50 Oral	Rabbit	2 g/kg	-
ethylene oxide	LD50 Oral	Rat	4200 mg/kg	-
	LC50 Inhalation Gas.	Mouse	835 ppm	4 hours
	LC50 Inhalation Gas.	Rat	800 ppm	4 hours
	LC50 Inhalation Gas.	Rat	1460 ppm	4 hours
	LC50 Inhalation Vapor	Guinea pig	1500 mg/m <sup>3</sup>	4 hours
	LD50 Intraperitoneal	Mouse	175 mg/kg	-
	LD50 Intravenous	Mouse	290 mg/kg	-
	LD50 Oral	Guinea pig	270 mg/kg	-
	LD50 Oral	Rat	72 mg/kg	-
ammonia, anhydrous	LD50 Subcutaneous	Rat	187 mg/kg	-
	LC50 Inhalation Gas.	Mouse	4230 ppm	1 hours
	LC50 Inhalation Gas.	Mouse	4500 ppm	1 hours
	LC50 Inhalation Gas.	Mouse	21430 ppm	30 minutes
	LC50 Inhalation Gas.	Rat	9500 ppm	1 hours
	LC50 Inhalation Gas.	Rat	17401 ppm	15 minutes
	LC50 Inhalation Gas.	Rat	2000 ppm	4 hours
	LC50 Inhalation Vapor	Mouse	4600 mg/m <sup>3</sup>	2 hours
	LC50 Inhalation Vapor	Rabbit	7 g/m <sup>3</sup>	1 hours
	LC50 Inhalation Vapor	Rat	7040 mg/m <sup>3</sup>	30 minutes
	LC50 Inhalation Vapor	Rat	4673 mg/kg	4 hours
	LC50 Inhalation Vapor	Rat	4673 mg/kg	4 hours
	LC50 Inhalation Vapor	Rat	18600 mg/m <sup>3</sup>	5 minutes
chlorobenzene	LC50 Inhalation Gas.	Mouse	4300 ppm	2 hours
	LC50 Inhalation Gas.	Mouse	1886 ppm	6 hours

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## SECTION 11: Toxicological information

	LC50 Inhalation Gas.	Rat	2965 ppm	6 hours
	LC50 Inhalation Vapor	Rat	39700 mg/m <sup>3</sup>	3.75 hours
	LD50 Dermal	Rabbit	>7940 mg/kg	-
	LD50 Intraperitoneal	Mouse	515 mg/kg	-
	LD50 Intraperitoneal	Rat	1655 mg/kg	-
	LD50 Oral	Guinea pig	2250 mg/kg	-
	LD50 Oral	Mouse	2300 mg/kg	-
	LD50 Oral	Rabbit	2250 mg/kg	-
	LD50 Oral	Rat	1110 mg/kg	-
	LD50 Oral	Rat	500 mg/kg	-
	LD50 Oral	Rat	1540 mg/kg	-
	LD50 Route of exposure unreported	Rabbit	2830 mg/kg	-
	LD50 Route of exposure unreported	Rat	2950 mg/kg	-

**Conclusion/Summary** : Not available.

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-butoxyethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
4-isocyanatosulphonyltoluene	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Moderate irritant	Rabbit	-	100 UI	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 UI	-
1,4-dioxane	Eyes - Moderate irritant	Guinea pig	-	10 ug	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
ethylene oxide	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	515 mg	-
	Eyes - Moderate irritant	Rabbit	-	6 hours 18 mg	-

**Conclusion/Summary** : Not available.

### Sensitization

**Conclusion/Summary** : Not available.

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
ethylene oxide	-	Subject: Mammalian-Animal	Positive

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
2-ethoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
4-isocyanatosulphonyltoluene	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

## SECTION 11: Toxicological information

Not available.

### Aspiration hazard

Not available.

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

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : 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** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : Adverse symptoms may include the following:  
 irritation  
 redness  
**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**Conclusion/Summary** : Not available.

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

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

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

**Reproductive toxicity** : No known significant effects or critical hazards.

**Other information** : Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

There are no data available on the mixture itself.  
 Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is not classified as hazardous to the environment, but contains substance(s) hazardous to the environment. See section 3 for details.

## SECTION 12: Ecological information

Product/ingredient name	Result	Species	Exposure	
2-butoxyethanol	Acute EC50 >1000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours	
	Acute LC50 800000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours	
1,4-dioxane	Acute LC50 1490000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours	
	Acute LC50 1250000 µg/l Marine water	Fish - Menidia beryllina	96 hours	
	Acute LC50 1.5 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours	
	Acute LC50 10800000 µg/l Fresh water	Fish - Pimephales promelas	96 hours	
	Acute LC50 9850000 µg/l Fresh water	Fish - Pimephales promelas	96 hours	
	Acute LC50 12326000 µg/l Fresh water	Fish - Pimephales promelas	96 hours	
	Acute LC50 9872000 µg/l Fresh water	Fish - Pimephales promelas	96 hours	
	Acute LC50 6700000 µg/l Marine water	Fish - Menidia beryllina	96 hours	
	Chronic NOEC 145 mg/l Fresh water	Fish - Pimephales promelas	32 days	
	Chronic NOEC 145 mg/l Fresh water	Fish - Pimephales promelas	32 days	
ethylene oxide	Chronic NOEC 145 mg/l Fresh water	Fish - Pimephales promelas	32 days	
	Acute LC50 1000000 µg/l Marine water	Crustaceans - Artemia sp.	48 hours	
	Acute LC50 490000 µg/l Marine water	Crustaceans - Artemia sp.	48 hours	
	Acute LC50 300000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours	
	Acute LC50 137000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours	
	Acute LC50 200000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours	
	Acute LC50 84000 µg/l Fresh water	Fish - Pimephales promelas	96 hours	
	ammonia, anhydrous	Acute EC50 29.2 mg/l Marine water	Algae - Ulva fasciata - Zoea	96 hours
		Acute LC50 2500 µg/l Fresh water	Crustaceans - Asellus aquaticus	48 hours
		Acute LC50 4980 µg/l Marine water	Crustaceans - Penaeus japonicus - Nauplii	48 hours
Acute LC50 5210 µg/l Marine water		Crustaceans - Fenneropenaeus penicillatus - Zoea	48 hours	
Acute LC50 2080 µg/l Fresh water		Crustaceans - Gammarus pulex	48 hours	
Acute LC50 2710 µg/l Fresh water		Crustaceans - Ceriodaphnia reticulata	48 hours	
Acute LC50 0.53 ppm Fresh water		Daphnia - Daphnia magna	48 hours	
Acute LC50 25400 µg/l Fresh water		Daphnia - Daphnia magna	48 hours	
Acute LC50 4180 µg/l Fresh water		Daphnia - Daphnia magna	48 hours	
Acute LC50 4130 µg/l Fresh water		Daphnia - Daphnia pulex	48 hours	
Acute LC50 300 µg/l Fresh water	Fish - Hypophthalmichthys nobilis	96 hours		
chlorobenzene	Acute LC50 450 µg/l Fresh water	Fish - Oncorhynchus tshawytscha - Underyearling	96 hours	
	Acute LC50 380 µg/l Fresh water	Fish - Hypophthalmichthys molitrix - Fingerling	96 hours	
	Acute LC50 660 µg/l Fresh water	Fish - Cyprinus carpio	96 hours	
	Acute LC50 440 µg/l Fresh water	Fish - Cyprinus carpio	96 hours	
	Chronic NOEC 550 µg/l Fresh water	Fish - Rutilus rutilus - Embryo	31 days	
	Chronic NOEC 0.204 mg/l Marine water	Fish - Dicentrarchus labrax	62 days	
	Acute EC50 20.2 mg/l Fresh water	Algae - Chlorella marina	72 hours	
	Acute EC50 19.6 mg/l Fresh water	Algae - Phaeodactylum tricornutum	72 hours	
	Acute EC50 30.2 mg/l Fresh water	Algae - Platymonas subcordiformis	72 hours	
	Acute EC50 12.5 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours	
chlorobenzene	Acute EC50 26.2 mg/l Fresh water	Algae - Nannochloropsis oculata	72 hours	
	Acute EC50 3.43 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours	
	Acute LC50 7900 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours	
	Acute LC50 8900 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours	
	Acute LC50 11000 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours	
	Acute LC50 10400 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours	

## SECTION 12: Ecological information

Acute LC50 11100 µg/l Fresh water	dubia - Neonate Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
Acute LC50 10.7 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
Acute LC50 10700 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
Acute LC50 8600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
Acute LC50 11500 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
Acute LC50 12800 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
Acute LC50 4500 µg/l Fresh water	Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
Acute LC50 3480 µg/l Fresh water	Fish - Carassius auratus - Egg	96 hours
Acute LC50 2370 µg/l Fresh water	Fish - Carassius auratus - Egg	96 hours
Acute LC50 3.58 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Chronic NOEC 2 mg/kg Fresh water	Fish - Carassius auratus	30 days
Chronic NOEC 8500 µg/l Fresh water	Fish - Danio rerio - Egg	28 days

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2-ethoxy-1-methylethyl acetate	0.76	-	low
2-butoxyethanol	0.81	-	low
1,4-dioxane	-0.42	0.3 to 0.7	low
ethylene oxide	-0.3	-	low
chlorobenzene	2.46	4.3 to 40	low

### 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

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**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

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## SECTION 13: Disposal considerations

- Methods of disposal** : The generation of waste should be avoided or minimized 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** : The classification of the product may meet the criteria for a hazardous waste.
- Disposal considerations** : Do not allow to enter drains or watercourses. Residues in empty containers should be neutralized with a decontaminant (see section 6).  
Dispose of according to all federal, state and local applicable regulations.  
If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.  
For further information, contact your local waste authority.

### European waste catalogue (EWC)




The European Waste Catalogue classification of this product, when disposed of as waste, is:

Waste code	Waste designation
EWC 08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

### Packaging

- Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Disposal considerations** : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers.  
Empty containers must be scrapped or reconditioned.  
Dispose of containers contaminated by the product in accordance with local or national legal provisions.
- Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3 	3 	3 
14.4 Packing group	III	III	III
14.5 Environmental hazards	No.	No.	No.

### Additional information

ADR/RID : **Tunnel code** (D/E)

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## SECTION 14: Transport information

IMDG : Emergency schedules F-E, \_S-E\_

**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 applicable.

## SECTION 15: Regulatory information

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

#### EU Regulation (EC) No. 1907/2006 (REACH)

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

###### Annex XIV

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

#### Other EU regulations

**VOC** : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

**VOC for Ready-for-Use Mixture** : Not applicable.

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

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

#### Ozone depleting substances (1005/2009/EU)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Seveso Directive

This product is controlled under the Seveso Directive.

#### Danger criteria

##### Category

P5c

#### National regulations

## SECTION 15: Regulatory information

**Industrial use** : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

Product/ingredient name	List name	Name on list	Classification	Notes
ethylene oxide	UK Occupational Exposure Limits EH40 - WEL	ethylene oxide; epoxyethane	Carc.	-

### International regulations

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

Not listed.

#### Montreal Protocol

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

**Europe** : Not determined.

**15.2 Chemical Safety Assessment** : No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = 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

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 3, H226 Skin Sens. 1, H317	On basis of test data Calculation method

### Full text of abbreviated H statements

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## SECTION 16: Other information

H220	Extremely flammable gas.
H221	Flammable gas.
H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H280	Contains gas under pressure; may explode if heated.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H360F <sub>d</sub>	May damage fertility. Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH014	Reacts violently with water.
EUH019	May form explosive peroxides.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH071	Corrosive to the respiratory tract.

### Full text of classifications [CLP/GHS]

Acute Tox. 2	ACUTE TOXICITY - Category 2
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - Category 2
Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - Category 3
Carc. 1B	CARCINOGENICITY - Category 1B
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Flam. Gas 1A	FLAMMABLE GASES - Category 1A
Flam. Gas 2	FLAMMABLE GASES - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Muta. 1B	GERM CELL MUTAGENICITY - Category 1B
Press. Gas (Comp.)	GASES UNDER PRESSURE - Compressed gas
Repr. 1B	TOXIC TO REPRODUCTION - Category 1B
Resp. Sens. 1	RESPIRATORY SENSITIZATION - Category 1
Skin Corr. 1	SKIN CORROSION/IRRITATION - Category 1
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
Skin Sens. 1A	SKIN SENSITIZATION - Category 1A
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

**SECTION 16: Other information**

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**Notice to reader**

## FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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