AQUIMAX FLAMESHIELD FR TOPCOAT HARDENER

HEALTH AND SAFETY DATA SHEET
According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH
Revised Date: 21/05/2024
Version: 8

1. PRODUCT AND COMPANY IDENTIFICATION

1.1	Product Code	AFS3400CAT
	Product name	AQUIMAX FLAMESHEILD FR TOPCOAT HARDENER
1.2	Relevant identified uses of the substance or mixture and uses advised against	Hardener for waterborne fire-retardant coatings. Hardener for water-based system for industrial and professional uses Industrial - PROC: 10, 13, 7. PC: 9a Professional - PROC: 10, 11, 13. PC: 9a Consumer - N/A
1.3	Name, Address, Telephone Number of the chemical manufacturer	Ultrimax Coatings Ltd Shaw Lane Industrial Estate, Ogden Road, Doncaster, DN2 4SE 01302 856666
1.4	Emergency phone number	01302 856666

2. HAZARD(S) IDENTIFICATION

2.1	Classification of the substance or mixture	The product is not classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP). However, since the product contains hazardous substances in concentrations such as to be declared in section no. 3, it requires a safety data sheet with appropriate information, compliant to (EU) Regulation 2020/878.
	CLP Regulation (EC) No 1272/2008	
2.2	Hazard classification and indication:	
	Flammable liquid, category 3: H226	Flammable liquid and vapour.
	Acute toxicity, category 4: H332	Harmful if inhaled.
	Specific target organ toxicity - single exposure, category 3: H335	May cause respiratory irritation.
	Skin sensitization, category 1: H317	May cause an allergic skin reaction.
	Hazardous to the aquatic environment, chronic toxicity, category 3: H412	Harmful to aquatic life with long lasting effects.

2. HAZARD(S) IDENTIFICATION CONTINUED

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

2.2	Hazard Pictograms	
	Signal Words	Warning
	Hazard Statements	
	H226	Flammable liquid and vapour.
	H332	Harmful if inhaled.
	H335	May cause respiratory irritation.
	H317	May cause an allergic skin reaction.
	H412	Harmful to aquatic life with long lasting effects.
	EUH204	Contains isocyanates. May produce an allergic reaction.
	Precautionary Statements:	
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P280	Wear protective gloves/ protective clothing / eye protection / face protection.
	P370+P378	In case of fire: use carbon dioxide, foam, powder and water spray to extinguish.
	P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
	P312	Call a POISON CENTRE / doctor if you feel unwell.
	P403+P233	Store in a well-ventilated place. Keep container tightly closed.
	Contains:	ALIPHATIC POLYISOCYANATE cyclohexanamine, N,N-dimethyl-, compds. with 3-(cyclohexylamino)-1-propanesulfonic acid-blocked 1,6-diisocyanatohexane homopolymer (2,4,6-trioxotriazine-1,3,5(2H,4H,6H)-triyl)tris(hexamethylene) isocyanate
2.3	Other hazards	On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%. The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1	Mixtures	
3.2	Components	contains Identification **X = Conc. %** **classification (EC) 127/2008 (CLP)** **ALIPHATIC POLYISOCYANATE** INDEX: 70 ≤ x < 80 **Acute Tox. 4 H332, STOT SE 3 H335, Skin Sens. 1 H317, Aquatic Chronic 3 H412 EC 679-501-7 ATE Inhalation mists/powders: 1,5 mg/l** EC: 679-501-7 CAS: 160994-68-3 REACH Reg. **METHOXY-1-METHYLETHYL ACETATE** INDEX: 607-195-00-7 5 ≤ x < 10 **Flam. Liq. 3 H226, STOT SE 3 H336** EC: 203-603-9 CAS: 108-65-6 REACH Reg. 01-2119475791-29 **cyclohexanamine, N,N-dimethyl-, compds. with 3-(cyclohexylamino)-1-propanesulfonic acid-blocked 1,6-diisocyanatohexane homopolymer** INDEX: 5 ≤ x < 10 **Acute Tox. 4 H332, STOT SE 3 H335, Skin Sens. 1 H317, Aquatic Chronic 3 H412 EC LC50 Inhalation mists/powders: 1,5 mg/l/4h** EC: CAS: 666723-27-9 REACH Reg. **(2,4,6-trioxotriazine-1,3,5(2H,4H,6H)-triyl)tris(hexamethylene) isocyanate** INDEX: 5 ≤ x < 10 **Acute Tox. 4 H332, STOT SE 3 H335, Skin Sens. 1 H317** EC: 223-242-0 **ATE Inhalation mists/powders: 1,5 mg/l** CAS: 3779-63-3 REACH Reg. 01-2119949539-20-xxxx **HEXAMETHYLENE-DI-ISOCYANATE** INDEX: 615-011-00-1 0,05 ≤ x < 0,09 **Acute Tox. 1 H330, Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317, Classification note according to Annex VI to the CLP Regulation: 2 Skin Sens. 1 H317: ≥ 0,5%, Resp. Sens. 1 H334: ≥ 0,5% LD50 Oral: 746 mg/kg, LC50 Inhalation vapours: 0,124 mg/l/4h** EC: 212-485-8 CAS: 822-06-0 REACH Reg. 01-2119457571-37 The full wording of hazard (H) phrases is given in section 16 of the sheet.

4. FIRST-AID MEASURES

4.1	Description of first aid measures	In case of doubt or in the presence of symptoms contact a doctor and show him this document. In case of more severe symptoms, ask for immediate medical aid.
	By inhalation	Remove victim to fresh air, away from the accident scene. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.
	By skin contact	Take off immediately all contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice/attention. Avoid further contact with contaminated clothing.
	By eye contact	: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.
	By ingestion / aspiration	Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.
	Rescuer Protection	It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.
4.2	Most important symptoms / effects, acute and delayed	Specific information on symptoms and effects caused by the product are unknown. DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product
4.3	Indication of immediate medical attention and special treatment needed, if necessary	Call a POISON CENTRE / doctor if you feel unwell. Means to have available in the workplace for specific and immediate treatment Running water for skin and eye wash.

5. FIRE-FIGHTING MEASURES

5.1	Extinguishing media	SUITABLE EXTINGUISHING EQUIPMENT Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak. UNSUITABLE EXTINGUISHING EQUIPMENT Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions
5.2	Specific hazards arising from the chemical	HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.
5.3	Advice for firefighters	GENERAL INFORMATION Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations. SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6. ACCIDENTAL RELEASE MEASURES

6.1	Personal precautions, protective equipment and emergency procedures:	Block the leakage if there is no hazard. Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures. Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.
6.2	Environmental precautions	The product must not penetrate into the sewer system or come into contact with surface water or ground water.
6.3	Methods and material for containment and cleaning up	Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.
6.4	Reference to other sections	Any information on personal protection and disposal is given in sections 8 and 13.

7. HANDLING AND STORAGE

7.1	Precautions for safe handing	Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.
7.2	Conditions for safe storage, including any incompatibilities	Store only in the original container. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details. 2-METHOXY-1-METHYLETHYL ACETATE: Store in an inert atmosphere, sheltered from moisture because it hydrolyses easily.
7.3	Specific end use(s)	See the exposure scenarios attached to this safety datasheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1

Control Parameters (United Kingdom)	EH40/2005 Workplace exposure limits (Fourth Edition 2020)					
EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.					
Threshold Limit Value						
2-METHOXY-1-METHYLETHYL ACETATE						
Type	Country	TWA/8h	PPM	STEL/15min	PPM	Remarks/Observations
WEL	GBR	274 mg/m3	50	548 mg/m3	100	SKIN
OEL	EU	275 mg/m3	50	550 mg/m3	100	SKIN

Predicted no-effect concentration - PNEC	Normal value in fresh water	0,635 mg/l
	Normal value in marine water	0,0635 mg/l
	Normal value for fresh water sediment	3,29 mg/kg
	Normal value for marine water sediment	0,329 mg/kg
	Normal value for water, intermittent release	6,35 mg/l
	Normal value of STP microorganisms	11 mg/l
	Normal value for the terrestrial compartment	0,29 mg/kg

8. EXPOSURE CONTROLS / PERSONAL PROTECTION CONTINUED

8.1 Health - Derived no-effect level - DNEL / DMEL

Effects on consumer

Route of exposure	Acute Local	Acute systematic	Chronic Local	Chronic systematic
oral		500 mg/kg/d	500	36mg/kg bw/d
Inhalation	NPI	NPI	33 mg/m3	33 mg/m3
Skin	NPI	NPI	NPI	320 mg/kg/d

Effects on workers

Route of exposure	Acute Local	Acute systematic	Chronic Local	Chronic systematic
oral				
Inhalation	550 mg/m3	NPI	NPI	275 mg/m3
Skin			NPI	796 mg/kg bw/d

8. EXPOSURE CONTROLS / PERSONAL PROTECTION CONTINUED

<table>
<tr><td rowspan="9">8.1</td><td colspan="7">Threshold Limit Value</td></tr>
<tr><td colspan="7">HEXAMETHYLENE-DI-ISOCYANATE</td></tr>
<tr><td>Type</td><td>Country</td><td>TWA/8h</td><td>PPM</td><td>STEL/15min</td><td>PPM</td><td>Remarks/Observations</td></tr>
<tr><td>VLA</td><td>ESP</td><td>0,035 mg/m3</td><td>0,005</td><td></td><td></td><td></td></tr>
<tr><td colspan="3" rowspan="6">Predicted no-effect concentration - PNEC</td><td colspan="2">Normal value in fresh water</td><td colspan="2">0,0774 mg/l</td></tr>
<tr><td colspan="2">Normal value in marine water</td><td colspan="2">0,00774 mg/l</td></tr>
<tr><td colspan="2">Normal value for fresh water sediment</td><td colspan="2">0,01334 mg/kg</td></tr>
<tr><td colspan="2">Normal value for marine water sediment</td><td colspan="2">0,00133 mg/kg</td></tr>
<tr><td colspan="2">Normal value of STP microorganisms</td><td colspan="2">4
8,42 mg/l</td></tr>
<tr><td colspan="2">Normal value for the terrestrial compartment</td><td colspan="2">0,0026 mg/kg</td></tr>
</table>

8. EXPOSURE CONTROLS / PERSONAL PROTECTION CONTINUED

<table>
<tr><td rowspan="4"></td><td rowspan="3">Health - Derived no-effect level - DNEL / DMEL</td><td colspan="3">Effects on consumer</td></tr>
<tr><td colspan="3"><table>
<tr><th>Route of exposure</th><th>Acute Local</th><th>Acute systematic</th><th>Chronic Local</th><th>Chronic systematic</th></tr>
<tr><td>Inhalation</td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td colspan="3">Effects on workers</td></tr>
<tr><td colspan="3"><table>
<tr><th>Route of exposure</th><th>Acute Local</th><th>Acute systematic</th><th>Chronic Local</th><th>Chronic systematic</th></tr>
<tr><td>Inhalation</td><td>0,07 mg/m3</td><td></td><td>0,035 mg/m3</td><td>VND</td></tr>
</table></td></tr>
<tr><td>8.1</td><td colspan="4">(2,4,6-trioxotriazine-1,3,5(2H,4H,6H)-triyl)tris(hexamethylene) isocyanate</td></tr>
<tr><td></td><td rowspan="6">Predicted no-effect concentration - PNEC</td><td>Normal value in fresh water</td><td colspan="2">0,127 mg/l</td></tr>
<tr><td></td><td>Normal value in marine water</td><td colspan="2">0,0127 mg/l</td></tr>
<tr><td></td><td>Normal value for fresh water sediment</td><td colspan="2">26700 mg/kg</td></tr>
<tr><td></td><td>Normal value for marine water sediment</td><td colspan="2">26670 mg/kg</td></tr>
<tr><td></td><td>Normal value for water, intermittent release</td><td colspan="2">1,72 mg/l</td></tr>
<tr><td></td><td>Normal value of STP microorganisms</td><td colspan="2">880 mg/l</td></tr>
</table>

8. EXPOSURE CONTROLS / PERSONAL PROTECTION CONTINUED

<table>
<tr><td rowspan="2">8.1</td><td rowspan="2">Health - Derived no-effect level - DNEL / DMEL</td><td>Effects on consumer
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<table><tr><th>Route of exposure</th><th>Acute Local</th><th>Acute systematic</th><th>Chronic Local</th><th>Chronic systematic</th></tr><tr><td>Inhalation</td><td>1 mg/m3</td><td></td><td>0,5 mg/m3</td><td></td></tr></table></td></tr>
<tr><td>Legend</td><td>(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction. VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.</td></tr>
<tr><td rowspan="4">8.2</td><td>Exposure controls</td><td>Take the normal precautions for handling chemicals and apply an adequate standard of workplace hygiene. Users must assess the risks in their workplace and adopt: - Primary collective protective measures such as adequate natural ventilation and local extraction - Personal protective equipment to manage the combination of residual risks Personal protective equipment varies according to the possible exposure and hazardousness of the working conditions, so the final choice depends on the risk assessment.</td></tr>
<tr><td>Hand protection</td><td>Use category III chemical resistant gloves according to the EN 374 standard Brief contact (splash protection) – non-exhaustive list Suitable material: NITRILE RUBBER (NBR) Glove thickness: greater than 0.4 mm Breakthrough time: from 30 to 60 minutes Breakthrough index: at least 2 The gloves must be replaced if there are signs of deterioration. In any case, users must assess the risks to determine the most suitable type of glove for the conditions of use.</td></tr>
<tr><td>Skin protection</td><td>Wear work clothes and safety footwear that complies with EN ISO 20344</td></tr>
<tr><td>Eye protection</td><td>Wear safety glasses (UNI EN ISO 16321-1).</td></tr>
</table>

8. EXPOSURE CONTROLS / PERSONAL PROTECTION CONTINUED

8.2	Respiratory protection	Use a mask with EN140 and/or EN136 approval, with an ABEK type filter (EN 14387)
	Environmental exposure controls	The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards. For information on controlling environmental exposure, see the exposure scenarios attached to this safety datasheet.

9. PHYSICAL AND CHEMICAL PROPERTIES

NOTE: Determination of the flash point may be NA (not applicable), the product being non flammable

		Properties	Value	Information
9.1	Information on basic physical and chemical properties	Appearance	liquid	
		Colour	colourless	
		Odour	solvent	
		Melting point / freezing point	Not available	
		Initial boiling point	>65°C	
		Flammability	flammable liquid	
		Lower explosive limit	not available	

9. PHYSICAL AND CHEMICAL PROPERTIES CONTINUED

		Properties	Value	Information
9.1	Information on basic physical and chemical properties	Upper explosive limit	not available	
		Flash point	45,5 °C	
		Auto-ignition temperature	not available	
		Decomposition temperature	not available	
		pH	not applicable	Reason for missing data: substance/mixture is non-soluble (in water)
		Kinematic viscosity	not available	
		Solubility	soluble in organic solvents	
		Partition coefficient: n-octanol/water	not available	
		Vapour pressure	not available	
		Density and/or relative density	1,056 g/cm3	
		Relative vapour density	not available	
		Particle characteristics	not applicable	

9. PHYSICAL AND CHEMICAL PROPERTIES CONTINUED

9.2.1	Information with regard to physical hazard classes	Information not available	
9.2.2	Other safety characteristics	Total solids (250°C / 482°F)	87,14 %
		VOC (Directive 2010/75/EU)	12,86 % - 135,83 g/litre
		VOC (volatile carbon)	6,95 % - 73,38 g/litre
		Explosive properties	not applicable
	Oxidising properties	not applicable	

10. STABILITY AND REACTIVITY

10.1	Reactivity	There are no particular risks of reaction with other substances in normal conditions of use.
		2-METHOXY-1-METHYLETHYL ACETATE
		Stable in normal conditions of use and storage. With the air it may slowly develop peroxides that explode with an increase in temperature.
		HEXAMETHYLENE-DI-ISOCYANATE
		Decomposes at 255°C/491°F.Polymerises at temperatures above 200°C/392°F
10.2	Chemical stability	The product is stable in normal conditions of use and storage.
10.3	Possibility of hazardous reactions	The vapours may also form explosive mixtures with the air
		2-METHOXY-1-METHYLETHYL ACETATE
		May react violently with: oxidising substances, strong acids, alkaline metals
		HEXAMETHYLENE-DI-ISOCYANATE
		May form explosive mixtures with: alcohols, bases. May react violently with: alcohols, amines, strong bases, oxidising agents, strong acids, water.

10. STABILITY AND REACTIVITY

10.4	Conditions to avoid	Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.
		HEXAMETHYLENE-DI-ISOCYANATE
		Avoid exposure to: high temperatures, moisture
10.5	Incompatible materials	2-METHOXY-1-METHYLETHYL ACETATE
		Incompatible with: oxidising substances, strong acids, alkaline metals.
		HEXAMETHYLENE-DI-ISOCYANATE
		Incompatible with: alcohols, carboxylic acids, amines, strong bases.
10.6	Hazardous decomposition products	In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.
		HEXAMETHYLENE-DI-ISOCYANATE
		May develop: nitric oxide,hydrogen cyanide

11. TOXICOLOGICAL INFORMATION

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1	Information on hazard classes as defined in Regulation (EC) No 1272/2008	
	Metabolism, toxicokinetics, mechanism of action and other information	2-METHOXY-1-METHYLETHYL ACETATE : The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.
	Information on likely routes of exposure	2-METHOXY-1-METHYLETHYL ACETATE WORKERS: inhalation; contact with the skin.
	Delayed and immediate effects as well as chronic effects from short and long-term exposure	2-METHOXY-1-METHYLETHYL ACETATE Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).
	Interactive effects	Information not available
	ACUTE TOXICITY	
	ATE (Inhalation- mists/powders) of the mixture:	1,5 mg/l
	ATE (Oral) of the mixture:	Not classified (no significant component)
	ATE (Dermal) of the mixture:	Not classified (no significant component)
	2-METHOXY-1-METHYLETHYL ACETATE	
	LD50 (Dermal):	2000 mg/kg ratto
	LD50 (Oral):	6190 mg/kg
	LC50 (Inhalation mists/powders)	> 23,5 mg/l/6h
	HEXAMETHYLENE-DI-ISOCYANATE	
	LD50 (Dermal):	> 7000 mg/kg
	LD50 (Oral):	746 mg/kg
	LC50 (Inhalation vapours):	0,124 mg/l/4h

11. TOXICOLOGICAL INFORMATION CONTINUED

11.1	ALIPHATIC POLYISOCYANATE	
	LD50 (Oral)	> 2000 mg/kg
	LC50 (Inhalation mists/powders)	0,39 mg/l 4h
	ATE (Inhalation mists/powders):	1,5 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
	cyclohexanamine, N,N-dimethyl-, compds. with 3-(cyclohexylamino)-1-propanesulfonic acid-blocked 1,6-diisocyanatohexane homopolymer	
	LD50 (Dermal):	> 2000 mg/kg
	LD50 (Oral):	> 5000 mg/kg
	LC50 (Inhalation mists/powders)	1,5 mg/l/4h
	PROPYLENE GLYCOLDIACETATE	
	LD50 (Dermal):	> 2000 mg/kg
	LD50 (Oral):	> 20000 mg/kg
	LC50 (Inhalation mists/powders):	317,042 mg/l/2h
	Mixture of: 5-chloro-2-methyl-2h-isothiazol-3-one and 2-methyl-2h-isothiazol-3-one methyl- 2H- isothiazol- 3-one (3:1)	
	LD50 (Dermal):	> 2000 mg/kg
	LD50 (Oral):	> 5000 mg/kg
	LC50 (Inhalation vapours):	> 0,84 mg/l
	(2,4,6-trioxotriazine-1,3,5(2H,4H,6H)-triyl)tris(hexamethylene) isocyanate	
	LC50 (Inhalation mists/powders):	390 mg/l/4h
	ATE (Inhalation mists/powders):	1,5 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

11. TOXICOLOGICAL INFORMATION CONTINUED

11.1	SKIN CORROSION / IRRITATION	Does not meet the classification criteria for this hazard class
	SERIOUS EYE DAMAGE / IRRITATION	Does not meet the classification criteria for this hazard class
	RESPIRATORY OR SKIN SENSITISATION	Sensitising for the skin
	GERM CELL MUTAGENICITY	Does not meet the classification criteria for this hazard class
	CARCINOGENICITY	Does not meet the classification criteria for this hazard class
	REPRODUCTIVE TOXICITY	Does not meet the classification criteria for this hazard class
	STOT - SINGLE EXPOSURE	May cause respiratory irritation
	STOT - REPEATED EXPOSURE	Does not meet the classification criteria for this hazard class
	ASPIRATION HAZARD	Does not meet the classification criteria for this hazard class
11.2	Information on other hazards	Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

12. ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available
Harmful to aquatic life with long lasting effects.

12.1	Toxicity	2-METHOXY-1-METHYLETHYL ACETATE	
		LC50 - for Fish	100 mg/l/96h
		EC50 - for Crustacea	408 mg/l/48h Daphnia magna
		EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h
		Chronic NOEC for Fish	47,5 mg/l (14 days) Oryzias lapites
		Chronic NOEC for Crustacea	> 100 mg/l (21 days) Daphnia magna
		Chronic NOEC for Algae / Aquatic Plants	> 1000 mg/l Selenastrum capricornutum
		HEXAMETHYLENE-DI-ISOCYANATE	
		LC50 - for Fish	> 82,8 mg/l/96h Danio rerio
		EC50 - for Crustacea	> 89,1 mg/l/48h Daphnia magna
		EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Desmodesmus subspicatus
		ALIPHATIC POLYISOCYANATE	
		LC50 - for Fish	28,3 mg/l/96h Danio rerio
		EC50 - for Crustacea	> 100 mg/l/48h Daphnia magna
		cyclohexanamine, N,N-dimethyl-, compds. with 3-(cyclohexylamino)-1-propanesulfonic acid-blocked 1,6-diisocyanatohexane homopolymer	
		LC50 - for Fish	42,2 mg/l/96h Orizas latipes
		EC50 - for Crustacea	> 100 mg/l/48h Daphnia magna
		EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Pseudokichneriella subcapitata
		PROPYLENE GLYCOLDIACETATE	
		LC50 - for Fish	82 mg/l/96h
		EC50 - for Crustacea	237 mg/l/48h Daphnia magna
		EC50 - for Algae / Aquatic Plants	273 mg/l/72h Pseudokirchneriella subcapitata
		(2,4,6-trioxotriazine-1,3,5(2H,4H,6H)-triyl)tris(hexamethylene) isocyanate	
		EC50 - for Algae / Aquatic Plants	1000 mg/l/72h

12. ECOLOGICAL INFORMATION - CONTINUED

12.2	Persistence and degradability	2-METHOXY-1-METHYLETHYL ACETATE	
		Solubility in water - Rapidly degradable	> 10000 mg/l
		HEXAMETHYLENE-DI-ISOCYANATE	
		Solubility in water - NOT Rapidly degradable	-
		cyclohexanamine, N,N-dimethyl-, compds. with 3-(cyclohexylamino)-1-propanesulfonic acid-blocked 1,6-diisocyanatohexane homopolymer	
		NOT rapidly degradable	
		PROPYLENE GLYCOLDIACETATE	
		Rapidly degradable	69,9%

12. ECOLOGICAL INFORMATION - CONTINUED

12.3	Bioaccumulative potential	2-METHOXY-1-METHYLETHYL ACETATE	
		Partition coefficient: n-octanol/water	1,2
		HEXAMETHYLENE-DI-ISOCYANATE	
		Partition coefficient: n-octanol/water	3,2
		BCF	0,82
12.4	Mobility in soil	Information not available	
12.5	Results of PBT and vPvB assessment	On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.	
12.6	Endocrine disrupting properties	Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.	
12.7	Other adverse effects	Information not available	

13. DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	For disposal or recovery in EU countries , use the relevant waste code (EWC code) identified in the European Waste Catalogue. The producer of the waste must assign the EWC code according to the sector and type of process. Disposal must be carried out by an authorised waste management company. After the producer of the waste has assigned the EWC code, the contaminated packaging must be sent for recovery or disposal in compliance with the European waste management regulations. Disposal must be carried out by an authorised waste management company. For waste disposal or recovery in countries outside the EU, comply with the national or local regulations in force. For disposal or recovery of contaminated packaging in countries outside the EU, comply with the national or local regulations in force. Waste transportation may be subject to regulations on transportation of hazardous goods.

14. TRANSPORT INFORMATION

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1	UN number or ID number	ADR / RID, IMDG, IATA: UN 1263
14.2	UN proper shipping name	ADR / RID: PAINT RELATED MATERIAL IMDG: PAINT RELATED MATERIAL IATA: PAINT RELATED MATERIAL
14.3	Transport hazard class(es)	ADR / RID: Class: 3 Label: 3 IMDG: Class: 3 Label: 3 IATA: Class: 3 Label: 3
14.4	Packing group	ADR / RID, IMDG, IATA: III 
14.5	Environmental hazards	ADR / RID: NO IMDG: not marine pollutant IATA: NO
14.6	Special precautions for user	ADR / RID: HIN - Kemler: 30 Limited Quantities: 5 lt Tunnel restriction code: (D/E) Special provision: 163, 367, 650 IMDG: EMS: F-E, S-E Limited Quantities: 5 lt IATA: Cargo: Maximum quantity: 220 L Packaging instructions: 366 Passengers: Maximum quantity: 60 L Packaging instructions: 355 Special provision: A3, A72, A192
14.7	Maritime transport in bulk according to IMO instruments	Information not relevant

15. REGULATORY INFORMATION

Only for uses exempt from EU DIRECTIVE 2004/42/CE.

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	
	Seveso Category - Directive 2012/18/EU:	P5c
	Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006	
	3 - 40	
	Contained substance Point: 75	
	Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors	not applicable
	Substances in Candidate List (Art. 59 REACH)	On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0, 1 %.
	Substances subject to authorisation (Annex XIV REACH)	None
	Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:	None
	Substances subject to the Rotterdam Convention:	None
	Substances subject to the Stockholm Convention:	None
	Healthcare controls	Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.
15.2	Chemical safety assessment	A chemical safety assessment has been performed for the following contained substances: 2-METHOXY-1-METHYLETHYL ACETATE

16. OTHER INFORMATION

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

16	Flam. Liq. 3	Flammable liquid, category 3
	Acute Tox. 1	Acute toxicity, category 1
	Acute Tox. 4	Acute toxicity, category 4
	Eye Irrit. 2	Eye irritation, category 2
	Skin Irrit. 2	Skin irritation, category 2
	STOT SE 3	Specific target organ toxicity - single exposure, category 3
	Resp. Sens. 1	Respiratory sensitization, category 1
	Skin Sens. 1	Skin sensitization, category 1
	Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
	H226	Flammable liquid and vapour.
	H330	Fatal if inhaled.
	H302	Harmful if swallowed.
	H332	Harmful if inhaled.
	H319	Causes serious eye irritation.
	H315	Causes skin irritation.
	H335	May cause respiratory irritation.
	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
	H317	May cause an allergic skin reaction
	H336	May cause drowsiness or dizziness
	H412	Harmful to aquatic life with long lasting effects.
	EUH204	Contains isocyanates. May produce an allergic reaction.

16. OTHER INFORMATION CONTINUED

16	Use descriptor system:	
	PC 9a	Coatings and paints, thinners, paint removers
	PROC 10	Roller application or brushing
	PROC 11	Non industrial spraying
	PROC 13	Treatment of articles by dipping and pouring
	PROC 7	Industrial spraying
	LEGEND:	
	ADR	European Agreement concerning the carriage of Dangerous goods by Road
	ATE	Acute Toxicity Estimate
	CAS	Chemical Abstract Service Number
	CE50	Effective concentration (required to induce a 50% effect)
	CE	Identifier in ESIS (European archive of existing substances)
	CLP	Regulation (EC) 1272/2008
	DNEL	Derived No Effect Level
	EmS	Emergency Schedule
	GHS	Globally Harmonized System of classification and labelling of chemicals
	IATA DGR	International Air Transport Association Dangerous Goods Regulation
	IC50	Immobilization Concentration 50%
	IMDG	International Maritime Code for dangerous goods

16. OTHER INFORMATION CONTINUED

16	IMO	International Maritime Organization
	INDEX	Identifier in Annex VI of CLP
	LC50	Lethal Concentration 50%
	LD50	Lethal dose 50%
	OEL	Occupational Exposure Level
	PBT	Persistent, bioaccumulative and toxic
	PEC	Predicted environmental Concentration
	PEL	Predicted exposure level
	PMT	Persistent, mobile and toxic
	PNEC	Predicted no effect concentration
	REACH	Regulation (EC) 1907/2006
	RID	Regulation concerning the international transport of dangerous goods by train
	TLV	Threshold Limit Value
	TLV CEILING	Concentration that should not be exceeded during any time of occupational exposure.
	TWA	Time-weighted average exposure limit
	TWA STEL	Short-term exposure limit
	VOC	Volatile organic Compounds
	vPvB	Very persistent and very bioaccumulative
	vPvM	Very persistent and very mobile
	WGK	Water hazard classes (German).

16. OTHER INFORMATION CONTINUED

16	GENERAL BIBLIOGRAPHY
	1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
	2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
	3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
	4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
	5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
	6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
	7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
	8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
	9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
	10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
	11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
	12. Regulation (EU) 2016/1179 (IX Atp. CLP)
	13. Regulation (EU) 2017/776 (X Atp. CLP)
	14. Regulation (EU) 2018/669 (XI Atp. CLP)
	15. Regulation (EU) 2019/521 (XII Atp. CLP)
	16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
	17. Regulation (EU) 2019/1148
	18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
	19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
	20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)

16. OTHER INFORMATION CONTINUED

16	21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)	
	22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)	
	23. Delegated Regulation (UE) 2023/707	
	24. Delegated Regulation (UE) 2023/1434 (XIX Atp. CLP)	
	The Merck Index. - 10th Edition	
	Handling Chemical Safety	
	INRS - Fiche Toxicologique (toxicological sheet)	
	Patty - Industrial Hygiene and Toxicology	
	N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition	
	IFA GESTIS website	
	ECHA website	
	Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy	
	Note for users:	The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product. This document must not be regarded as a guarantee on any specific product property. The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses. Provide appointed staff with adequate training on how to use chemical products.
	CALCULATION METHODS FOR CLASSIFICATION	Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9. Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

16. OTHER INFORMATION CONTINUED

16	Environmental hazards	Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.
	Changes to previous review: The following sections were modified:	02 / 03 / 08 / 11 / 15
	Changes to previous review:	The following sections were modified: 01 / 02 / 03 / 09 / 11 / 12 / 16.
	Exposure Scenarios	
	Substance	2-METHOXY-1-METHYLETHYL ACETATE
	Scenario Title	2-METHOXY-1-METHYLETHYL ACETATE
	Revision nr.	1
	File	EN_CAS 108-65-6_1.pdf