SAFETY DATA SHEET

United Kingdom (UK)

Date of issue/Date of revision

: 13 June 2022

Version : 12.01

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

1.1 Product identifier

Product name	: SELEMIX 9-110 HARDENER FOR SINGLE STAGE	E
Product code	: 1.959.8110/E5	
Other means of identification	n	
Not available.		

1.2 Relevant identified uses	of the substance or mixture and uses advised against
Product use	: Professional applications, Used by spraying.
Use of the substance/ mixture	: Coating.
Uses advised against	: Product is not intended, labelled or packaged for consumer use.

1.3 Details of the supplier of the safety data sheet

PPG Industries Italia S.r.l., Via Comasina, 121, 20161 Milano, Italy Tel: +39 02 6404.1 PPG Industries (UK) Ltd., Needham Road, Stowmarket, Suffolk, IP14 2AD, UK Tel: +44 (0) 1449 773 338

e-mail address of person : Product.Stewardship.EMEA@ppg.com responsible for this SDS

1.4 Emergency telephone number

Company emergency telephone number : +39 02 6404.1 (0800-1700)

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 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335

Aquatic Chronic 3, H412

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

Code : 1.959.8110/E5 SELEMIX 9-110 HARDENER I	
SECTION 2: Hazards	identification
Hazard pictograms	
Signal word	: Danger
Hazard statements	 Flammable liquid and vapour. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.
Precautionary statements	
Prevention	: Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, i present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
Storage	: Store in a well-ventilated place. Keep container tightly closed.
Disposal	 Dispose of contents and container in accordance with all local, regional, national and international regulations. P280, P210, P305 + P351 + P338, P310, P403 + P233, P501
Hazardous ingredients	 Socyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers (isocyanurate type hydrophilic aliphatic polyisocyanate [3-(2,3-epoxypropoxy)propyl]trimethoxysilane hydrophilic aliphatic polyisocyanate 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate
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	: As from August 24 2023 adequate training is required before industrial or professional use.
Special packaging requirem	ients
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	: This mixture does not contain any substances that are assessed to be a PBT or a vPv
Other hazards which do not result in classification	: Prolonged or repeated contact may dry skin and cause irritation.

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SECTION 3: Composition/information on ingredients

.2 Mixtures : Mixture					
Product/ingredient name	Identifiers	% by weight	Classification	Specific Conc. Limits, M-factors and ATEs	Туре
Isocyanatomethyl- 3,5,5-trimethylcyclohexyl isocyanate, oligomers (isocyanurate type)	REACH #: 01-2119488734-24 EC: 931-312-3 CAS: 53880-05-0 (EC 931-312-3)	≥25 - ≤50	Skin Sens. 1B, H317 STOT SE 3, H335	-	[1] [2]
hydrophilic aliphatic polyisocyanate	CAS: 160994-68-3	≥25 - ≤43	Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 3, H412	ATE [Inhalation (vapours)] = 11 mg/l	[1]
[3-(2,3-epoxypropoxy) propyl]trimethoxysilane	REACH #: 01-2119513212-58 EC: 219-784-2 CAS: 2530-83-8	≥5.0 - ≤10	Eye Dam. 1, H318	-	[1]
2-methoxy-1-methylethyl acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	≥5.0 - ≤10	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
hydrophilic aliphatic polyisocyanate	CAS: 191427-71-1	≥5.0 - ≤10	Skin Sens. 1, H317 STOT SE 3, H335	-	[1]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥5.0 - ≤8.8	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304	ATE [Dermal] = 1700 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥1.0 - ≤4.1	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	ATE [Inhalation (vapours)] = 17.8 mg/l	[1] [2]
3-isocyanatomethyl- 3,5,5-trimethylcyclohexyl isocyanate	REACH #: 01-2119490408-31 EC: 223-861-6 CAS: 4098-71-9 Index: 615-008-00-5	≤0.30	Acute Tox. 1, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	ATE [Inhalation (dusts and mists)] = 0.04 mg/l Resp. Sens. 1, H334: C ≥ 0.5% Skin Sens. 1, H317: C ≥ 0.5%	[1] [2]

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SECTION 3: Composition/information on ingredients

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.

Xylene: Several REACH registrations cover the REACH registered substance with xylene isomers, ethylbenzene (and toluene). The other REACH Registrations include: 01-2119555267-33 reaction mass of ethylbenzene and m-xylene and p-xylene, 01-2119486136-34 Aromatic hydrocarbons, C8, 01-2119539452-40 reaction mass of ethylbenzene and xylene. Type

Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

SUB codes represent substances without registered CAS Numbers.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
Inhalation	: Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
Skin contact	: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
Ingestion	: If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
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

Causes serious eye damage.
May cause respiratory irritation.
Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
No known significant effects or critical hazards.
ns
Adverse symptoms may include the following: pain watering redness
Adverse symptoms may include the following: respiratory tract irritation coughing
Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur

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SECTION 4: First aid	l measures	
Ingestion	: Adverse symptoms may include the following: stomach pains	
4.3 Indication of any immedi	iate 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: Firefigh	ting measures	
5.1 Extinguishing media		
Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.	
Unsuitable extinguishing	: Do not use water jet.	

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: Flammable liquid and vapour. 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. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous combustion products	: Decomposition products may include the following materials: carbon oxides nitrogen oxides metal oxide/oxides Cyanate and isocyanate. hydrogen cyanide
5.3 Advice for firefighters	
Special precautions 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. 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, pro	te	ctive 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. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe 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".

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SECTION 6: Accide	ntal release measures
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). Water polluting material. May be harmful to the environment if released in large quantities.
6.3 Methods and material fo	or 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 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.
Special provisions	: 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). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13). Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
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 breathe vapour or mist. Do not ingest. Avoid release to the environment. 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.
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SECTION 7: Handli	ng and storage
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 between the following temperatures: 5 to 35°C (41 to 95°F). 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. Store locked up. Eliminate all ignition sources. Separate from oxidising 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Precautions should be taken to minimise exposure to atmospheric humidity or water. CO_2 will be formed, which, in closed containers, could result in pressurisation.

7.3 Specific end use(s)

See Section 1.2 for Identified uses.

SECTION 8: Exposure controls/personal protection

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).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
S-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers (isocyanurate type)	IPEL (-). TWA: 0.5 mg/m ³ STEL: 1 mg/m ³
2-methoxy-1-methylethyl acetate	EU OEL (Europe, 10/2019). Absorbed through skin. STEL: 550 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 275 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
xylene	EU OEL (Europe, 10/2019). [xylene, mixed isomers] Absorbed through skin. STEL: 442 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 221 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
ethylbenzene	EU OEL (Europe, 10/2019). Absorbed through skin. STEL: 884 mg/m ³ 15 minutes. STEL: 200 ppm 15 minutes. TWA: 442 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	ACGIH TLV (United States, 1/2021). TWA: 0.005 ppm 8 hours.

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SECTION 8: Exposure controls/personal protection

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 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

Product/ingredient name	Туре	Exposure	Value	Population	Effects
S-lsocyanatomethyl- 3,5,5-trimethylcyclohexyl isocyanate, oligomers	DNEL	Long term Inhalation	0.29 mg/m ³	Workers	Local
(isocyanurate type)					
	DNEL	Short term Inhalation	0.58 mg/m³	Workers	Local
[3-(2,3-epoxypropoxy)propyl] trimethoxysilane	DNEL	Short term Inhalation	147 mg/m³	Workers	Systemic
	DNEL	Short term Dermal	21 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	10 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	17 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	70.5 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	26400 mg/m ³	General population	Systemic
2-methoxy-1-methylethyl acetate	DNEL	Long term Oral	1.67 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	33 mg/m ³	General population	Local
	DNEL	Long term Inhalation	33 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	54.8 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	153.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	275 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	550 mg/m³	Workers	Local
xylene	DNEL	Short term Inhalation	260 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	260 mg/m³	General population	Local
	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	65.3 mg/m³	General population	Systemic
	DNEL	Long term Oral	12.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	221 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	442 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	221 mg/m³	Workers	Local
	DNEL	Short term Inhalation	442 mg/m³	Workers	Local
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	65.3 mg/m³	General population	Local
	DNEL	Short term Inhalation	260 mg/m ³	General population	Local
	DNEL	Short term Inhalation	260 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	221 mg/m³	Workers	Local
ethylbenzene	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	15 mg/m ³	General population	
	DNEL	Long term Inhalation	77 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	293 mg/m ³	Workers	Local
3-isocyanatomethyl-	DNEL	Long term Inhalation	0.045 mg/m³	Workers	Local
3,5,5-trimethylcyclohexyl					
English (GB)		United King	dom (UK)		8/19

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SECTION 8: Exposure controls/personal protection

isocyanate	e				
-	DNE	EL Short term Inhalation	0.045 mg/m ³	Workers	Local
	DNE	EL Short term Inhalation	0.045 mg/m ³	Workers	Local
	DNE	EL Long term Inhalation	0.045 mg/m ³	Workers	Local

PNECs

Product/ingredient name	Туре	Compartment Detail	Value	Method Detail
[3-(2,3-epoxypropoxy)propyl] trimethoxysilane	-	Fresh water	1 mg/l	Assessment Factors
	-	Marine water	0.1 mg/l	Assessment Factors
	-	Sewage Treatment Plant	10 mg/l	Assessment Factors
	-	Fresh water sediment	3.6 mg/kg dwt	Equilibrium Partitioning
	-	Marine water sediment	0.36 mg/kg dwt	Equilibrium Partitioning
	-	Soil	0.14 mg/kg dwt	Equilibrium Partitioning
2-methoxy-1-methylethyl acetate	-	Fresh water	0.635 mg/l	-
	-	Marine water	0.0635 mg/l	-
	-	Fresh water sediment	3.29 mg/kg	-
	-	Marine water sediment	0.329 mg/kg	-
	-	Soil	0.29 mg/kg	-
	-	Sewage Treatment Plant	100 mg/l	-
xylene	-	Fresh water	0.327 mg/l	-
	-	Marine water	0.327 mg/l	-
	-	Sewage Treatment Plant	6.58 mg/l	-
	-	Fresh water sediment	12.46 mg/kg dwt	-
	-	Marine water sediment	12.46 mg/kg dwt	-
	-	Soil	2.31 mg/kg	-
ethylbenzene	-	Fresh water	0.1 mg/l	Assessment Factors
	-	Marine water	0.01 mg/l	Assessment Factors
	-	Sewage Treatment Plant	9.6 mg/l	Assessment Factors
	-	Fresh water sediment	13.7 mg/kg dwt	Equilibrium Partitioning
	-	Marine water sediment	1.37 mg/kg dwt	Equilibrium Partitioning
	-	Soil	2.68 mg/kg dwt	Equilibrium Partitioning
	-	Secondary Poisoning	20 mg/kg	-
3-isocyanatomethyl-	-	Fresh water	0.06 mg/l	Assessment Factors
3,5,5-trimethylcyclohexyl isocyanate			_	
	-	Marine water	0.003 mg/l	Assessment Factors
	-	Sewage Treatment Plant	10.6 mg/l	Assessment Factors
	-	Fresh water sediment	218.92 mg/kg dwt	Equilibrium Partitioning
	-	Marine water sediment	21.89 mg/kg dwt	Equilibrium Partitioning
	-	Soil	44.01 mg/kg dwt	Equilibrium Partitioning

8.2 Exposure controls		
Appropriate engineering controls	: Use only with adequate ventilation. Use process enclosures, local exhaust or other engineering controls to keep worker exposure to airborne contamin any recommended or statutory limits. The engineering controls also need to vapour or dust concentrations below any lower explosive limits. Use explosive ventilation equipment.	nants below to keep gas,
Individual protection measu	<u>res</u>	
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical produce eating, smoking and using the lavatory and at the end of the working period Appropriate techniques should be used to remove potentially contaminated Contaminated work clothing should not be allowed out of the workplace. We contaminated clothing before reusing. Ensure that eyewash stations and s showers are close to the workstation location.	l. clothing. /ash
Eye/face protection	: Chemical splash goggles and face shield. Use eye protection according to	EN 166.
English (GB)	United Kingdom (UK)	9/19

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

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SECTION 8: Exposure controls/personal protection

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 greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. 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.
Gloves	: butyl rubber
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	: Use an air-fed respirator unless a site-specific assessment determines that an air-fed respirator is not necessary, in which case the results of the risk assessment should be utilized to determine whether respiratory protection is necessary and what type of protection is appropriate. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Wear a respirator conforming to EN140. Filter type: organic vapour (Type A) and particulate filter P3
Restrictions on use	: Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.
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.

Appearance	
Physical state	: Liquid.
Colour	: Colourless.
Odour	: Characteristic.
Odour threshold	: Not available.
Melting point/freezing point	1

SECTION 9: Physical and chemical properties

Initial boiling point and boiling range Flammability	:	average: -80.45°C (>37.78°C)					
Flammability								
	:	liquid						
Upper/lower flammability or explosive limits	:	Greatest known ran	ge: Lower	0.8%	Upper: 6.7% ()	(ylene)		
Flash point	1	Closed cup: 43°C						
Auto-ignition temperature	:							
		Ingredient name		°C	°F		Method	
		2-methoxy-1-methylethyl	acetate	333	631.4	C	DIN 51794	
Decomposition temperature	:	Stable under recom	mended s	torage a	and handling co	nditions	s (see Sec	tion 7).
pH	1	Not applicable. inso	luble in wa	iter.				
Viscosity	:	Kinematic (40°C): >	21 mm²/s					
Viscosity	:	60 - 100 s (ISO 6mr	n)					
Solubility(ies)	1	_						
Media		Result						
<mark>∞</mark> old water		Not soluble						
Partition coefficient: n-octanol/ water	:	Not applicable.						
Vapour pressure	:							
			Vapou	ır Press	sure at 20°C	Vap	our pres	sure at 50°C
		Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
		et hylbenzene	9.3	1.2				
Evaporation rate	:	Highest known value butyl acetate	e: 0.84 (et	hylbenz	ene) Weighte	d averag	je: 0.79co	mpared with
Relative density	1	1.09						
Vapour density	:	Highest known value Weighted average:			3-(2,3-epoxypr	ороху)р	ropyl]trime	ethoxysilane)
Explosive properties	:	The product itself is vapour or dust with			the formation	of an ex	plosible n	nixture of
Oxidising properties	1	Product does not pr	esent an c	xidizing	hazard.			
article characteristics								
		Not applicable.						
Median particle size	1	recappiloable						
Median particle size		prot approable.						

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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	:	In a fire, hazardous decomposition products may be produced. Refer to protective measures listed in sections 7 and 8.
10.5 Incompatible materials	:	Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.
10.6 Hazardous decomposition products	:	Depending on conditions, decomposition products may include the following materials: Cyanate and isocyanate. carbon oxides nitrogen oxides hydrogen cyanide metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
₿-Isocyanatomethyl-	LC50 Inhalation Dusts and	Rat	>5010 mg/m ³	4 hours
3,5,5-trimethylcyclohexyl isocyanate, oligomers (isocyanurate type)	mists			
	LD50 Oral	Rat	>14 g/kg	-
[3-(2,3-epoxypropoxy)propyl] trimethoxysilane	LC50 Inhalation Dusts and mists	Rat	>5300 mg/m ³	4 hours
,	LD50 Dermal LD50 Oral	Rabbit Rat	4.3 g/kg	-
2-methoxy-1-methylethyl acetate	LC50 Inhalation Vapour	Rat	7.01 g/kg 30 mg/l	- 4 hours
	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	6190 mg/kg	-
hydrophilic aliphatic polyisocyanate	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
xylene	LD50 Dermal LD50 Oral	Rabbit Rat	1.7 g/kg 4.3 g/kg	-
ethylbenzene	LC50 Inhalation Vapour LD50 Dermal	Rat Rabbit	17.8 mg/l 17.8 g/kg	4 hours
	LD50 Oral	Rat	3.5 g/kg	-
3-isocyanatomethyl-	LC50 Inhalation Dusts and	Rat	0.04 mg/l	4 hours
3,5,5-trimethylcyclohexyl isocyanate	mists			
	LD50 Dermal	Rabbit	1060 mg/kg	-
	LD50 Oral	Rat	4825 mg/kg	-

Conclusion/Summary : There are no data available on the mixture itself.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
[6] (2,3-epoxypropoxy)propyl] trimethoxysilane	Eyes - Cornea opacity	Rabbit	11.8	1 minutes	24 hours
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

Conclusion/Summary

English ((GB)
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United Kingdom (UK)

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SECTION 11: Toxicological information

Skin : There are no data available on the mixture itself.

- **Eyes** : There are no data available on the mixture itself.
- **Respiratory** : There are no data available on the mixture itself.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers (isocyanurate type)	skin	Guinea pig	Sensitising
hydrophilic aliphatic polyisocyanate	skin	Mouse	Sensitising

Conclusion/Summary

Skin Respiratory	There are no data available on the mixture itself.There are no data available on the mixture itself.
Mutagenicity	
Conclusion/Summary	: There are no data available on the mixture itself.
Carcinogenicity	
Conclusion/Summary	: There are no data available on the mixture itself.
Reproductive toxicity	
Conclusion/Summary	: There are no data available on the mixture itself.
Teratogenicity	
Conclusion/Summary	: There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Selsocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers (isocyanurate type)	Category 3	-	Respiratory tract irritation
hydrophilic aliphatic polyisocyanate	Category 3	-	Respiratory tract irritation
2-methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
hydrophilic aliphatic polyisocyanate	Category 3	-	Respiratory tract irritation
xylene	Category 3	-	Respiratory tract irritation
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs

Aspiration hazard

Product/ingredient name	Result
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1

Information on likely

```
: Not available.
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routes of exposure

Potent	<u>ial a</u>	<u>acute</u>	healt	<u>h ef</u> l	<u>iects</u>

Inhalation: May cause respiratory irritation.Ingestion: No known significant effects or critical hazards.Skin contact: Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.

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SECTION 11: Toxicological information

Eye contact	: Causes serious eye damage.
	vsical, chemical and toxicological characteristics
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
Ingestion	: Adverse symptoms may include the following: stomach pains
Skin contact	: Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur
Eye contact	: Adverse symptoms may include the following: pain watering redness
Delayed and immediate effe	cts as well as chronic effects from short and long-term exposure
Short term exposure	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
<u>Long term exposure</u>	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Potential chronic health effe	<u>ects</u>
Not available.	
Conclusion/Summary	: Not available.
General	 Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. 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.
Prolonged or repeated contac	t may dry skin and cause irritation. Repeated exposure to high vapor concentrations may

Prolonged or repeated contact may dry skin and cause irritation. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapour/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. 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. Repeated exposure may lead to permanent respiratory disability. Moisture-sensitive material. Trimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness. Avoid contact with skin and clothing.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

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SECTION 11: Toxicological information

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
[8] (2,3-epoxypropoxy)propyl]trimethoxysilane	Acute LC50 324 mg/l	Daphnia	48 hours
2-methoxy-1-methylethyl acetate	Acute LC50 134 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh	Daphnia -	-
	water	Ceriodaphnia dubia	

Conclusion/Summary : There are no data available on the mixture itself.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
2-methoxy-1-methylethyl acetate	-	83 % - Readily - 28 days	-	-
ethylbenzene	-	79 % - Readily - 10 days	-	-
0	·			

Conclusion/Summary : There are no data available on the mixture itself.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
P-methoxy-1-methylethyl acetate xylene	-	-	Readily Readily
ethylbenzene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
P-methoxy-1-methylethyl acetate xylene ethylbenzene 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	1.2 3.12 3.6 0.99	- 7.4 to 18.5 79.43 -	low low low low

12.4 Mobility in soil

Soil/water partition	: Not available.
coefficient (Koc)	
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 Endocrine disrupting properties

Not available.

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SECTION 12: Ecological information

12.7 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. : Yes.

Hazardous waste

European waste catalogue (EWC)

Waste code	Waste designation
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 minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
Type of packaging	European waste catalogue (EWC)
Container	15 01 04 metallic packaging
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 on Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the cont Do not cut, weld or grind used containers unless they have been cleaned thoroug internally. Avoid dispersal of spilt material and runoff and contact with soil, water drains and sewers.	

14. Transport information

	ADR/RID	ADN	IMDG	ΙΑΤΑ
14.1 UN number or ID number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	III	II	III	III
14.5 Environmental hazards	No.	Yes.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

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14. Transport information

Additional information

ADR/RID	: None identified.
Tunnel code	: (D/E)
ADN	: The product is only regulated as an environmentally hazardous substance when transported in tank vessels.
IMDG	: None identified.
IATA	: None identified.
14.6 Special pred user	cautions for : 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 Maritime tra bulk according t	

instruments

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 authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

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

placing on the market and use of certain dangerous substances, mixtures and articles

Ozone depleting substances (1005/2009/EU)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category	
P5c	

15.2 Chemical safety assessment

: No Chemical Safety Assessment has been carried out.

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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]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

PBT = Persistent, Bioaccumulative and Toxic

vPvB = Very Persistent and Very Bioaccumulative

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

IMDG = International Maritime Dangerous Goods

IATA = International Air Transport Association

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

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
STOT SE 3, H335	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal 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.
H373	May cause damage to organs through prolonged or repeated
	exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

English (GB)	United Kingdom (UK)	18/19
Skin Sens. 1	SKIN SENSITISATION - Category 1	
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2	
Resp. Sens. 1	RESPIRATORY SENSITISATION - Category 1	
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3	
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2	
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2	
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	
Asp. Tox. 1	ASPIRATION HAZARD - Category 1	
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category	y 3
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category	
Acute Tox. 4	ACUTE TOXICITY - Category 4	
Acute Tox. 1	ACUTE TOXICITY - Category 1	

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SECTION 16: Other information				
Skin Sens. 1B STOT RE 2		SKIN SENSITISATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2		
STOT SE 3		SPEČIFÍC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3		
<u>History</u>				
Date of issue/ Date of revision	: 13 June 2022			
Date of previous issue	: 28 February 202	22		
Prepared by	: EHS			

Version

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