

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

1.1 Product identifier	
Product name	: Penguard Tie Coat 100 Comp B
UFI	: PAQ1-M06H-600D-MU1K
Product code	: 621
Product description	: Hardener.
Product type	: Liquid.
Other means of identification	: Not available.

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

Use in coatings - Industrial use Use in coatings - Professional use

1.3 Details of the supplier of the safety data sheet

Jotun A/S P.O.Box 2021 3202 Sandefjord Norway

Tel: + 47 33 45 70 00 Fax: +47 33 45 72 42 E-mail: SDSJotun@jotun.no

National contact

Jotun Ibérica S.A. Poligon Industrial Santa Rita Calle Estàtica, no 3 08755 - Castellbisbal Barcelona

Tel: +34 93 771 18 00 Fax: +34 93 771 18 01 SDSJotun@jotun.com

1.4 Emergency telephone number

Jotun Ibérica S.A. Tel. +34 93 77 11 800 (8.00-17.00)

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 Corr. 1C, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336 STOT RE 2, H373 (hearing organs) Aquatic Chronic 3, H412

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

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

Penguard Tie Coat 100 Comp B

SECTION 2: Hazards identification

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.

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2.2 Label elements

Signal word	nger.	
Hazard statements	35 - May cause respira 36 - May cause drows 73 - May cause damag aring organs)	in burns and eye damage. atory irritation.
Precautionary statements		
General	t applicable.	
Prevention		
Response	01 + P310, P330, P33 NTER or doctor. Rins 03 + P361 + P353, P3 Itaminated clothing. R doctor. 03 - Wash contaminat 05 + P351 + P338, P3 nutes. Remove contac	 ED: Immediately call a POISON CENTER or doctor. 1 - IF SWALLOWED: Immediately call a POISON e mouth. Do NOT induce vomiting. 10 - IF ON SKIN (or hair): Take off immediately all nse skin with water. Immediately call a POISON CENTER ed clothing before reuse. 10 - IF IN EYES: Rinse cautiously with water for several clenses, if present and easy to do. Continue rinsing. ON CENTER or doctor.
Storage	03 + P233 - Store in a	well-ventilated place. Keep container tightly closed.
Disposal	01 - Dispose of conter ional and international	ts and container in accordance with all local, regional, regulations.
Hazardous ingredients	ene an-1-ol ylbenzene ,6-tris(dimethylaminor Irocarbons, C9, aroma nethoxy-2-propanol	
Supplemental label elements		es, polyethylenepoly-, triethylenetetramine fraction and 2,2'- roduce an allergic reaction.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	t applicable.	
Special packaging requiren		
Containers to be fitted with child-resistant fastenings	applicable.	
Tactile warning of danger	t applicable.	

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SECTION 2: Hazards identification

2.3 Other hazards

 Product meets the criteria
 : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

 for PBT or vPvB according
 vPvB.

 to Regulation (EC) No.
 1907/2006, Annex XIII

 Other hazards which do
 : None known.

not result in classification

SECTION 3: Composition/information on ingredients

3.2 Mixtures	: Mixture				
Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Туре
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥25 - ≤47	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 Aquatic Chronic 3, H412	ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 20 mg/ I	[1] [2]
butan-1-ol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	≥10 - ≤20	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	ATE [Oral] = 500 mg/kg	[1] [2]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥10 - ≤15	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]
2,4,6-tris (dimethylaminomethyl) phenol	REACH #: 01-2119560597-27 EC: 202-013-9 CAS: 90-72-2 Index: 603-069-00-0	≤10	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318	ATE [Oral] = 1673 mg/kg	[1]
hydrocarbons, C9, aromatics	REACH #: 01-2119455851-35 EC: 265-199-0 CAS: 128601-23-0	≤10	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	-	[1]
1-methoxy-2-propanol	REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3	≤10	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
amines, polyethylenepoly-, triethylenetetramine fraction	REACH #: 01-2119487919-13	<1	Acute Tox. 4, H302 Acute Tox. 4, H312	ATE [Oral] = 1716.2 mg/kg	[1]
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SECTION 3: Composition/information on ingredients

SECTION 5. Composition/mormation on ingredients							
	EC: 292-588-2 CAS: 90640-67-8		Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412	ATE [Dermal] = 1465.4 mg/kg			
2,2'-iminodiethylamine	REACH #: 01-2119473793-27 EC: 203-865-4 CAS: 111-40-0	≤0.85	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 2, H330 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 1080 mg/kg ATE [Dermal] = 1090 mg/kg ATE [Inhalation (vapours)] = 0.5 mg/l	[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.

<u>Type</u>

[1] 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.

SECTION 4: First aid measures

4.1 Description of first aid measures

The second for the second s	
General	: In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
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

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 vapour 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. 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.

SECTION 4: First aid measures

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

Ingestion may cause nausea, diarrhea and vomiting.

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.

Contains amines, polyethylenepoly-, triethylenetetramine fraction, 2,2'-iminodiethylamine. May produce an allergic reaction.

Over-exposure signs/symptoms

Eye contact	: Adverse symptoms may include the following: pain watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion	: Adverse symptoms may include the following: stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

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

See toxicological information (Section 11)

SECTION 5: Firefighting measures				
5.1 Extinguishing media Suitable extinguishing media	: Recommended: alcohol-resistant foam, CO ₂ , powders, water spray.			
Unsuitable extinguishing media	: Do not use water jet.			
5.2 Special hazards arising f	rom the substance or mixture			
Hazards from the substance or mixture	: Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.			
Hazardous combustion products	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.			
5.3 Advice for firefighters				
Special protective actions for fire-fighters	: Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.			
Special protective equipment for fire-fighters	: Appropriate breathing apparatus may be required.			

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures				
For non-emergency personnel				
For emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".		
6.2 Environmental precautions	:	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.		
6.3 Methods and material for containment and cleaning up	:	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). Preferably clean with a detergent. Avoid using solvents.		
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

Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see Section 8).

Never use pressure to empty. Container is not a pressure vessel.

Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

Do not allow to enter drains or watercourses.

Information on fire and explosion protection

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Seveso Directive - Reporting thresholds

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SECTION 7: Handling and storage

1	Danger criteria				
	• •	Notification and MAPP threshold	Safety report threshold		
	P5c	5000 tonne	50000 tonne		

See Technical Data Sheet / packaging for further information.

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

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
xylene	National institute of occupational safety and health (Spain, 4/2021). 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.
butan-1-ol	National institute of occupational safety and health (Spain, 4/2021). Absorbed through skin. STEL: 154 mg/m ³ 15 minutes. STEL: 50 ppm 15 minutes. TWA: 20 ppm 8 hours. TWA: 61 mg/m ³ 8 hours.
ethylbenzene	National institute of occupational safety and health (Spain, 4/2021). Absorbed through skin. TWA: 100 ppm 8 hours. TWA: 441 mg/m ³ 8 hours. STEL: 200 ppm 15 minutes. STEL: 884 mg/m ³ 15 minutes.
1-methoxy-2-propanol	National institute of occupational safety and health (Spain, 4/2021). Absorbed through skin. STEL: 568 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 375 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
2,2'-iminodiethylamine	National institute of occupational safety and health (Spain, 4/2021). Absorbed through skin. Skin sensitiser. TWA: 1 ppm 8 hours. TWA: 4.3 mg/m ³ 8 hours.
Recommended monitoring : procedures	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.
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SECTION 8: Exposure controls/personal protection

DNELs/DMELs

Product/ingredient name	Туре	Exposure	Value	Population	Effects
xylene	DNEL	Long term	65.3 mg/m ³	General	Local
		Inhalation Short term	260 mg/m^3	population	
	DNEL		260 mg/m ³	General	Local
		Inhalation	260 m m/m 3	population	Curata maia
	DNEL	Short term	260 mg/m ³	General	Systemic
		Inhalation	004	population	1 1
	DNEL	Long term	221 mg/m ³	Workers	Local
		Inhalation		a .	
	DNEL	Long term Oral	12.5 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Long term	65.3 mg/m ³	General	Systemic
		Inhalation		population	
	DNEL	Long term Dermal	125 mg/kg	General	Systemic
			bw/day	population	
	DNEL	Long term Dermal	212 mg/kg	Workers	Systemic
			bw/day		
	DNEL	Long term	221 mg/m ³	Workers	Systemic
		Inhalation			
	DNEL	Short term	442 mg/m ³	Workers	Local
		Inhalation			
	DNEL	Short term	442 mg/m ³	Workers	Systemic
		Inhalation			
butan-1-ol	DNEL	Long term Oral	1.5625 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Long term Dermal	3.125 mg/	General	Systemic
			kg bw/day	population	-
	DNEL	Long term	55.357 mg/	General	Systemic
		Inhalation	m³	population	-
	DNEL	Long term	155 mg/m ³	General	Local
		Inhalation	Ū	population	
	DNEL	Long term	310 mg/m ³	Workers	Local
		Inhalation	Ū		
ethylbenzene	DNEL	Long term Oral	1.6 mg/kg	General	Systemic
			bw/day	population	5
	DNEL	Long term	15 mg/m ³	General	Systemic
		Inhalation	Ũ	population	
	DNEL	Long term	77 mg/m³	Workers	Systemic
		Inhalation	J J		-
	DNEL	Long term Dermal	180 mg/kg	Workers	Systemic
		Ū	bw/day		-
	DNEL	Short term	293 mg/m ³	Workers	Local
		Inhalation	Ū		
	DMEL	Long term	442 mg/m ³	Workers	Local
		Inhalation	Ū		
	DMEL	Short term	884 mg/m ³	Workers	Systemic
		Inhalation	Ĭ		
2,4,6-tris(dimethylaminomethyl)	DMEL	Long term Dermal	0.2 mg/kg	Workers	Systemic
phenol		5	bw/day		,
•	DNEL	Long term	0.31 mg/m ³	Workers	Systemic
		Inhalation	U		,
	DNEL	Long term Oral	0.075 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Short term Dermal	0.075 mg/	General	Systemic
			kg bw/day	population	,
	DNEL	Long term Dermal	0.075 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Short term	0.13 mg/m^3	General	Systemic
		Inhalation	5.10 mg/m	population	
	DNEL	Long term	0.13 mg/m ³	General	Systemic
			5.15 mg/m	population	Cysternic
		Inhalation		DODINATION	

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	DNEL	Long term Dermal	0.15 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.53 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	0.6 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	2.1 mg/m ³	Workers	Systemic
hydrocarbons, C9, aromatics	DNEL	Long term Dermal	12.5 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	151 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	7.5 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	32 mg/m³	General population [Consumers]	Systemic
	DNEL	Long term Oral	7.5 mg/kg bw/day	General population [Consumers]	Systemic
1-methoxy-2-propanol	DNEL	Long term Oral	33 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	43.9 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	78 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	183 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	369 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	553.5 mg/ m ³	Workers	Local
	DNEL	Short term Inhalation	553.5 mg/ m ³	Workers	Systemic
amines, polyethylenepoly-, triethylenetetramine fraction	DNEL	Long term Inhalation	0.096 mg/ m ³	General population	Systemic
	DNEL	Long term Oral	0.14 mg/ kg bw/day	General population	Systemic
0.01 iminodiathylawia	DNEL	Long term Inhalation	0.54 mg/m ³		Systemic
2,2'-iminodiethylamine	DNEL	Long term Inhalation	0.87 mg/m ³		Local
	DNEL DNEL	Long term Dermal Short term Inhalation	1.1 mg/cm ² 2.6 mg/m ³	Workers Workers	Local Local
	DNEL	Long term Inhalation	4.6 mg/m ³	General population	Systemic
	DNEL	Short term Dermal	4.88 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	4.88 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	11.4 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation		Workers	Systemic
	DNEL	Short term Inhalation	27.5 mg/m ³	population	Systemic
	DNEL	Short term Inhalation	92.1 mg/m ³	Workers	Systemic

PNECs

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Compartment Detail	Value	Method Detail
xylene	Fresh water	0.327 mg/l	-
•	Marine	0.327 mg/l	-
	Sewage Treatment	6.58 mg/l	-
	Plant	U U	
	Fresh water sediment	12.46 mg/kg dwt	-
	Marine water sediment	12.46 mg/kg dwt	-
	Soil	2.31 mg/kg dwt	-
butan-1-ol	Fresh water	0.082 mg/l	-
	Marine	0.0082 mg/l	-
	Sewage Treatment	2476 mg/l	-
	Plant		
	Fresh water sediment	0.178 mg/kg dwt	-
	Marine water sediment	0.0178 mg/kg dwt	-
	Soil	0.015 mg/kg dwt	_
ethylbenzene	Fresh water	0.1 mg/l	_
	Marine	0.01 mg/l	_
	Sewage Treatment	9.6 mg/l	_
	Plant	5.0 mg/i	-
	Fresh water sediment	13.7 mg/kg dwt	_
	Soil	2.68 mg/kg dwt	
	Secondary Poisoning	20 mg/kg	
2,4,6-tris(dimethylaminomethyl)phenol	Fresh water	0.084 mg/l	-
	Marine	0.0084 mg/l	-
	Sewage Treatment	0.2 mg/l	-
	Plant	0.2 mg/i	-
1-methoxy-2-propanol	Fresh water	10 mg/l	-
	Marine	1 mg/l	-
	Sewage Treatment Plant	100 mg/l	-
	Fresh water sediment	52.3 mg/kg dwt	
	Marine water sediment		-
	Soil	5.2 mg/kg dwt	-
aminaa nalvathulananalu	Fresh water	5.49 mg/kg dwt	-
amines, polyethylenepoly-, triethylenetetramine fraction	Fresh water	190 µg/l	Assessment Factors
,	Fresh water sediment	95.9 mg/kg	Equilibrium Partitioning
	Marine water	38 µg/l	Assessment Factors
	Marine water sediment	19.2 mg/kg	Equilibrium Partitioning
	Soil	19.1 mg/kg	Equilibrium Partitioning
	Sewage Treatment	4.25 mg/l	Assessment Factors
	Plant	, i i i i i i i i i i i i i i i i i i i	
	Secondary Poisoning	0.18 mg/kg	Assessment Factors
2,2'-iminodiethylamine	Fresh water	0.56 mg/l	-
	Marine	0.056 mg/l	-
	Sewage Treatment	6 mg/l	-
	Plant		
	Fresh water sediment	1072 mg/kg dwt	-
	Marine water sediment	107.2 mg/kg dwt	-
	Soil	214 mg/kg dwt	-

8.2 Exposure controls

Appropriate engineering controls

: Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

Individual protection measures

SECTION 8: Exposure controls/personal protection

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying to ISO 16321-1:2022 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: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

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

Always ensure that gloves are free from defects and that they are stored and used correctly.

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

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves

Wear suitable gloves tested to ISO 374-1:2016.

Not recommended, gloves(breakthrough time) < 1 hour: PVC (> 0.5 mm)

May be used, gloves(breakthrough time) 4 - 8 hours: Viton® (> 0.7 mm), neoprene (> 0.35 mm), butyl rubber (> 0.4 mm)

Recommended, gloves(breakthrough time) > 8 hours: Teflon (> 0.35 mm), nitrile rubber (> 0.4 mm), 4H/Silver Shield® (> 0.07 mm), polyvinyl alcohol (PVA) (> 0.3 mm)

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.

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	: Personnel should wear antistatic clothing made of natural fibres or of high- temperature-resistant synthetic fibres.
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	: If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. Use respiratory mask with charcoal and dust filter when spraying this product, according to EN 14387 (as filter combination A2-P2). In confined spaces, use compressed-air or fresh-air respiratory equipment. When use of roller or brush, consider use of charcoalfilter.
Environmental exposure controls	: Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance					
Physical state	: Liquid.				
Colour	: Colourle	SS.			
Odour	: Charact	eristic.			
Date of issue/Date of revision	: 29.03.2023	Date of previous issue	: 28.03.2023	Version	: 1.02

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SECTION 9: Physical and chemical properties

,		
Odour threshold	pplicable.	
Melting point/freezing point	pplicable.	
Initial boiling point and boiling range	st known value: 119 31°C (274.7°F)	9°C (246.2°F) (butan-1-ol). Weighted average:
Flammability	pplicable.	
Lower and upper explosion limit	13.74%	
Flash point	ed cup: 25°C	
Auto-ignition temperature	st known value: 27	0°C (518°F) (1-methoxy-2-propanol).
Decomposition temperature	vailable.	
рН	pplicable.	
Viscosity	natic (40°C): >20.5	mm²/s
Solubility in water	vailable.	
Partition coefficient: n-octanol/ water	vailable.	
Vapour pressure	est known value: 1.2 age: 0.83 kPa (6.23	2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weighted mm Hg) (at 20°C)
Evaporation rate	est known value: 0.8 outyl acetate	34 (ethylbenzene) Weighted average: 0.73compared
Density	/cm³	
Vapour density	est known value: 3.3	7 (Air = 1) (xylene). Weighted average: 3.45 (Air = 1)
Explosive properties	vailable.	
Oxidising properties	vailable.	
Particle characteristics		
Median particle size	pplicable.	

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	1	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	Stable under recommended storage and handling conditions (see Section 7).
10.3 Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	1	When exposed to high temperatures may produce hazardous decomposition products.
10.5 Incompatible materials	:	Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
10.6 Hazardous decomposition products	:	Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

SECTION 11: Toxicological information

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

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 vapour 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. Repeated or prolonged contact with

SECTION 11: Toxicological information

the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

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

Ingestion may cause nausea, diarrhea and vomiting.

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.

Contains amines, polyethylenepoly-, triethylenetetramine fraction, 2,2'-iminodiethylamine. May produce an allergic reaction.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LC50 Inhalation Vapour	Rat	20 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
	TDLo Dermal	Rabbit	4300 mg/kg	-
butan-1-ol	LD50 Oral	Rat	790 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat - Male	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
2,4,6-tris	LD50 Oral	Rat	1673 mg/kg	-
(dimethylaminomethyl) phenol				
1-methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 mg/kg	-
amines, polyethylenepoly-, triethylenetetramine fraction	LD50 Dermal	Rabbit - Male, Female	1465.4 mg/kg	-
	LD50 Oral	Rat - Male, Female	1716.2 mg/kg	-
2,2'-iminodiethylamine	LC50 Inhalation Vapour	Rat	0.5 mg/l	4 hours
	LD50 Dermal	Rabbit	1090 mg/kg	-
	LD50 Oral	Rat	1080 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Penguard Tie Coat 100 Comp B	3773.1	3330.3	N/A	28.9	N/A
xylene	4300	1100	N/A	20	N/A
butan-1-ol	500	N/A	N/A	N/A	N/A
ethylbenzene	3500	N/A	N/A	17.8	N/A
2,4,6-tris(dimethylaminomethyl)phenol	1673	N/A	N/A	N/A	N/A
1-methoxy-2-propanol	6600	13000	N/A	N/A	N/A
amines, polyethylenepoly-, triethylenetetramine fraction	1716.2	1465.4	N/A	N/A	N/A
2,2'-iminodiethylamine	1080	1090	N/A	0.5	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
2,4,6-tris (dimethylaminomethyl) phenol	Eyes - Severe irritant	Rabbit	-	24 hours 50 µg	-
	Skin - Severe irritant	Rat	-	0.25 ml	-
1-methoxy-2-propanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
2,2'-iminodiethylamine	Skin - Mild irritant Skin - Moderate irritant	Rabbit Rabbit	-	500 mg 500 milligrams	-

SECTION 11: Toxicological information

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
amines, polyethylenepoly-, triethylenetetramine fraction	skin	Mammal - species unspecified	Sensitising
2,2'-iminodiethylamine	skin	Mammal - species unspecified	Sensitising

Mutagenicity

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

- **Developmental effects** : No known significant effects or critical hazards.
- Fertility effects : No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
butan-1-ol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
hydrocarbons, C9, aromatics	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
1-methoxy-2-propanol	Category 3	-	Narcotic effects
2,2'-iminodiethylamine	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
hydrocarbons, C9, aromatics	ASPIRATION HAZARD - Category 1

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 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 classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure
etes 48 hours
elas 96 hours
statum 96 hours
48 hours
96 hours
48 hours
72 hours
96 hours
72 hours
48 hours
96 hours
ella 96 hours

12.2 Persistence and degradability

Conclusion/Summary	: Not available.		
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene ethylbenzene hydrocarbons, C9, aromatics amines, polyethylenepoly-, triethylenetetramine fraction	- - -	- - - -	Readily Readily Not readily Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
xylene	3.12	8.1 to 25.9	low
butan-1-ol	1	-	low
ethylbenzene	3.6	-	low
2,4,6-tris	0.219	-	low
(dimethylaminomethyl)			
phenol			
hydrocarbons, C9, aromatics	-	10 to 2500	high
1-methoxy-2-propanol	<1	-	low
amines, polyethylenepoly-,	-2.65	-	low
triethylenetetramine fraction			
2,2'-iminodiethylamine	-5.58	2.8 to 6.3	low

12.4 Mobility in soil

Soil/water partition coefficient (Koc)	: 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.

SECTION 12: Ecological information

12.6 Endocrine disrupting properties

Not available.

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

<u>Product</u>	
Methods of disposal	: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
Hazardous waste	: Yes.
Disposal considerations	: Do not allow to enter drains or watercourses. 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
08 01 11*	Waste paint and varnish containing organic solvents or other dangerous 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.
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.
Type of packaging	European waste estalegue (EMC)

	Type of packaging		European waste catalogue (EWC)
	CEPE Guidelines	15 01 10*	packaging containing residues of or contaminated by hazardous substances
taken when handling Empty containers or residues may create container. Do not cu thoroughly internally.		taken when Empty conta residues ma container. I thoroughly in	al and its container must be disposed of in a safe way. Care should be handling emptied containers that have not been cleaned or rinsed out. ainers or liners may retain some product residues. Vapour from product by create a highly flammable or explosive atmosphere inside the Do not cut, weld or grind used containers unless they have been cleaned internally. Avoid dispersal of spilt material and runoff and contact with ays, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	ΙΑΤΑ
14.1 UN number or ID number	UN3469	UN3469	UN3469	UN3469
14.2 UN proper shipping name	Paint, flammable, corrosive	Paint, flammable, corrosive	Paint, flammable, corrosive	Paint, flammable, corrosive
14.3 Transport hazard class(es)	3 (8)	3 (8)	3 (8)	3 (8)
14.4 Packing group	111	Ш	111	111
14.5 Environmental hazards	No.	Yes.	No.	No.
Additional informa	tion			l
ADR/RID	<u>Special</u>	dentification number 3 provisions 163 code (D/E)	8	

:	The product is only regulated as an environmentally hazardous substance when
	transported in tank vessels.

- IMDG : Emergency schedules F-E, S-C
- **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 Maritime transport in	: Not available.
bulk according to IMO	
instruments	

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture <u>EU Regulation (EC) No. 1907/2006 (REACH)</u>

Annex XIV - List of substances subject to authorisation

Annex XIV

ADN

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 available.

SECTION 15: Regulatory information

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.

Persistent Organic Pollutants Not listed.

Seveso Directive

This product may add to the calculation for determining whether a site is within the scope of the Seveso Directive on major accident hazards.

National regulations

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.

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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.

15.2 Chemical safety : N

: No Chemical Safety Assessment has been carried out.

assessment

SECTION 16: Other information

Indicates information	on 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

SECTION 16: Other information

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
Skin Corr. 1C, H314	Calculation method
Eye Dam. 1, H318	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 2, H373 (hearing organs)	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.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
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.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful 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]

Acute Tox. 2	ACUTE TOXICITY - Category 2	
Acute Tox. 2	ACUTE TOXICITY - Category 4	
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2	
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3	
Asp. Tox. 1	ASPIRATION HAZARD - Category 1	
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2	
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2	
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3	
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 SENSITISATION - Category 1	
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2	
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3	
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Notice to reader

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