

1. IDENTIFICATION OF THE SUBSTRATE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name/designation: Caltech Metcoat – Activator.

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

Relevant identified uses: Hardener.

Recommended restrictions: Reserved for industrial and professional use.

1.3 Supplier details

Alumasc Building Products Ltd
White House Works, Bold Road, Sutton, St Helens, Merseyside, United Kingdom, WA9 4JG
Tel: +44 (0)1744 648400
e-mail: technical@alumascroofing.com

1.4 Emergency telephone number

Association / Organisation: National Poisons Information Service
Emergency telephone numbers: 0344 892 0111 (Healthcare professionals only)
Other emergency telephone numbers Alumasc Building Products: +44 17 4464 8400
(Mon-Thurs – 08.30-17.00 Fri – 08.30-16.00)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Product definition: Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP][1]:

Flam. Liq. 3, H226, Skin Sens. 1, H317, TOT SE 3, H335, STOT SE 3, H336, 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

Hazard pictures:



Signal word:

Warning.

Hazardous component(s) to be indicated on label:

3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate, Oligomers
N-Butyl Acetate.
Solvent Naphtha (Petroleum), Light Arom.
3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate.

Hazard statements:

H226 - Flammable liquid and vapour.
H317 - May cause an allergic skin reaction. H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H412 - Harmful to aquatic life with long lasting effects.

Supplementary statements:

EUH204 - Contains isocyanates. May produce an allergic reaction.

Precautionary statements prevention:

P280 - Wear protective gloves.
P284 - In case of inadequate ventilation wear respiratory protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271 - Use only outdoors or in a well-ventilated area.

Precautionary statements response: P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Precautionary statements storage: P403 + P235 - Store in a well-ventilated place. Keep cool.

Precautionary statements disposal: P501 - Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

Supplemental label elements:

EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed.
Do not breathe spray or mist.

Supplemental label elements : Detergents - Regulation (EC) No 907/2006:

Not applicable.

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 requirements:

Containers to be fitted with child-resistant fastenings:

Not applicable.

Tactile warning of danger:

Not applicable.

2.3 Other hazards

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

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

Other hazards which do not result in classification:

None known.

3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

3.1 Substances

See 'Composition on ingredients' in Section 3.2.

3.2 Mixtures

United Kingdom: Great Britain:

Ingredient	Numbers	Concentration	Classification (EC) 1272/2008	Specific Conc. Limits, M-factors and ATEs	Type
3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate, Oligomers	REACH #: 01-2119488734-24 EC: 500-125-5 CAS: 53880-05-0	≥25 - ≤50	Skin Sens. 1B, H317 STOT SE 3, H335	-	[1] [2]
N-Butyl Acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≥10 - <20	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	-	[1] [2]
Solvent Naphtha (Petroleum), Light Arom.	REACH #: 01-2119455851-35 EC: 265-199-0 CAS: 64742-95-6 Index: 649-356-00-4	≥10 - ≤25	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	-	[1]

2-Methoxy-1-Methylethyl Acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	≤10	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate	EC: 223-861-6 CAS: 4098-71-9 Index: 615-008-00-5	≤0,3	Acute Tox. 1, H330 Skin Corr. 1C, H314 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 2, H411	ATE [Inhalation (dusts and mists)] = 0,031 mg/l Resp. Sens. 1, H334: C ≥ 0,5% Skin Sens. 1, H317: C ≥ 0,5%	[1] [2]

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

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

Type:

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

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

4. FIRST AID MEASURES

4.1 Description of first aid measures

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

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms:

Eye contact:	No specific data.
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: Irritation. Redness.
Ingestion:	No specific data.

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.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Use dry chemical, CO₂, water spray (fog) or foam.

Extinguishing media which must not be used for safety reasons:

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 dioxide.
Carbon monoxide.
Nitrogen oxides.

5.3 Advice for fire-fighters

Special protective actions for fire-fighters:

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

Special protective equipment for fire-fighters:

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

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

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

6.2 Environmental Precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill:

Stop leak if without risk. Move containers from spill area. 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. 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.

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.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures:

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. 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. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene:

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

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. 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.

Seveso Directive - Reporting thresholds Danger criteria.

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

7.3 Specific end use(s)

Recommendations:

Not available.

Industrial sector specific solutions:

Not available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

8.1 Control parameters

Occupational exposure limits / Biological exposure indices:

United Kingdom: Great Britain:

Product/ingredient name	Exposure limit values
3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate, Oligomers	EH40/2005 WELs (United Kingdom (UK), 1/2020). Inhalation sensitiser. STEL: 0,07 mg/m ³ , (as -NCO) 15 minutes. TWA: 0,02 mg/m ³ , (as -NCO) 8 hours.
N-Butyl Acetate	EH40/2005 WELs (United Kingdom (UK), 12/2020). STEL: 966 mg/m ³ 15 minutes. STEL: 200 ppm 15 minutes. TWA: 724 mg/m ³ 8 hours. TWA: 150 ppm 8 hours.
2-Methoxy-1-Methylethyl Acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 548 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 274 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate	EH40/2005 WELs (United Kingdom (UK), 12/2011). Inhalation sensitiser. STEL: 0,07 mg/m ³ , (as NCO) 15 minutes. TWA: 0,02 mg/m ³ , (as NCO) 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.


DNELs/DMELs:

Product/ingredient name	Type	Exposure	Value	Population	Effects
N-Butyl Acetate	DNEL	Long term Dermal	7 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	3,4 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Inhalation	960 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	960 mg/m³	Workers	Local
	DNEL	Long term Inhalation	480 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	480 mg/m³	Workers	Local
	DNEL	Short term Inhalation	859,7 mg/ m³	General population [Consumers]	Systemic
	DNEL	Short term Inhalation	859,7 mg/ m³	General population [Consumers]	Local
	DNEL	Long term Inhalation	102,34 mg/ m³	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	102,34 mg/ m³	General population [Consumers]	Local
	DNEL	Long term Dermal	3,4 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Dermal	3,4 mg/kg bw/day	General population [Consumers]	Systemic
2-Methoxy-1-Methylethyl Acetate	DNEL	Long term Inhalation	275 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	153,5 mg/ m³	Workers	Systemic
	DNEL	Long term Dermal	54,8 mg/m³	General population [Consumers]	Systemic
	DNEL	Long term Oral	1,67 mg/m³	General population [Consumers]	Systemic
	DNEL	Long term Oral	1,67 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	33 mg/m³	General population	Local
	DNEL	Long term Inhalation	33 mg/m³	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

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
N-Butyl Acetate	Fresh water	0,18 mg/l	-
	Marine	0,018 mg/l	-
	Fresh water sediment	0,981 mg/kg	-
	Marine water sediment	0,0981 mg/kg	-
	Soil	0,0903 mg/kg	-
	Sewage treatment plant	35,6 mg/l	-
2-Methoxy-1-Methylethyl Acetate	Fresh water	0,635 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	-

8.2 Exposure controls

8.2.1. Appropriate engineering Controls:	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
8.2.2. 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye and face protection:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Use eye protection according to EN 166. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: safety glasses with side-shields.
Skin 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.

Hands 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. > 8 hours (breakthrough time): nitrile rubber gloves. The recommendation for the type or types of glove to use when handling this product is based on information from the following source: EN374. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
Body protection:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods. Recommended: 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:	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapour (Type A) and particulate filter (EN 140).
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.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important health, safety and environmental information

Physical state:	Liquid	Colour:	Colourless
Form:	Liquid	Relative density [g/cm³]	Not available
Odour:	Not available	Temperature [°C]:	Not available
Odour threshold:	Not available	Density	1,0324 g/cm³ [20°C (68°F)] [DIN 53217]
pH:	Not applicable	Partition coefficient n-octanol/water:	Not applicable
pH : Justification	Product is non-soluble (in water)	Auto-ignition temperature (°C):	Not relevant due to nature of the product
Melting point/freezing point (°C):	Not available	Decomposition temperature:	Not available
Flash point (°C):	Closed cup: 23°C (73,4°F) [Literature]	Viscosity (cSt):	Dynamic: 100 mPa·s [ICI Rotothinner]
Evaporation rate [kg/(s m²)]:	Not available	Explosive properties:	Not available
Explosion limits [Vol-%]:	Not available	Vapour density (Air = 1):	Not available
Flammability (solid, gas):	Not available	Solubility in water [g/l]:	Not available
Lower Explosive Limit (%):	Not available	Cold water:	Not soluble
Upper Explosive Limit (%):	Not available	Hot water:	Not soluble
Oxidising properties:	Not available	Particle Size:	Not applicable

Boiling range:

Ingredient name	°C	°F	Method
N-Butyl Acetate	126	258,8	OECD 103

Vapour pressure:

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
N-Butyl Acetate	11,25	1,5	DIN EN 13016-2	43,5	5,8	

10. STABILITY AND REACTIVITY

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials

Reactive or incompatible with the following materials:
Oxidising materials.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Product/ingredient name	Result	Species	Dose	Exposure
3-Isocyanatomethyl- 3,5,5-Trimethylcyclohexyl Isocyanate, Oligomers	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
N-Butyl Acetate	LD50 Oral	Rat	>500 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat – Male, Female	23,4mg/l	4 hours
	LC50 Inhalation Vapour	Rat	>21 mg/l	4 hours
	LC50 Inhalation Vapour	Rat	9700 mg/kg	4 hours
Solvent Naphtha (Petroleum), Light Arom.	LD50 Oral	Rat	1400 mg/kg	-
	LD50 Oral	Rat	8400 mg/kg	-
2-Methoxy-1-Methylethyl Acetate	LD50 Dermal	Rabbit	>5 g/kg	-
3-Isocyanatomethyl- 3,5,5-Trimethylcyclohexyl Isocyanate	LD50 Oral	Rat	>5000 mg/kg	-
	NOEL Inhalation Dusts and mists	Rat	8100mg/m³	4 hours
	LC50 Inhalation Dusts and mists	Rat	0,031 mg/l	4 hours

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Our company policy is one of continuous research and development; we therefore reserve the right to amend content herein without prior notice.

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)
N-Butyl Acetate	N/A	N/A	N/A	N/A	23,4
Solvent Naphtha (Petroleum), Light Arom.	8400	N/A	N/A	N/A	N/A
3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate	N/A	N/A	N/A	N/A	0,031

Irritation/Corrosion:

Product/ingredient name	Result	Species	Score	Exposure	Observation
3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate, Oligomers	Eyes - Cornea opacity	Rabbit	1	-	-
	Skin - Oedema	Rabbit	0	-	-
Solvent Naphtha (Petroleum), Light Arom.	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters	-

Conclusion/Summary:

Skin: Based on available data, the classification criteria are not met.
Eyes: Based on available data, the classification criteria are not met.
Respiratory: May cause respiratory irritation. May cause drowsiness or dizziness.

Sensitisation:

Product/ingredient name	Route of exposure	Species	Result
3-Isocyanatomethyl- 3,5,5-Trimethylcyclohexyl Isocyanate, Oligomers	Skin	Guinea pig	Sensitising
	Skin	Mouse	Sensitising
	Skin	Rabbit	Sensitising

Conclusion/Summary:

Skin: May cause an allergic skin reaction.
Respiratory: Based on available data, the classification criteria are not met.

Mutagenicity:

Product/ingredient name	Test	Experiment	Result
3-Isocyanatomethyl- 3,5,5-Trimethylcyclohexyl Isocyanate, Oligomers	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 473	Experiment: In vitro Subject: Mammalian-Animal	Negative

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Carcinogenicity:

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Reproductive toxicity

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure):

Product/ingredient name	Category	Route of exposure	Target organs
Caltech Metcoat - Activator	Category 3	-	Respiratory tract irritation
3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate, Oligomers	Category 3	-	Narcotic effects
N-Butyl Acetate	Category 3	-	Respiratory tract irritation
Solvent Naphtha (Petroleum), Light Arom.	Category 3	-	Narcotic effects
	Category 3	-	Respiratory tract irritation
2-Methoxy-1-Methylethyl Acetate	Category 3	-	Narcotic effects
3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate	Category 3	-	Narcotic effects
	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure):

Not available.

Aspiration hazard

Product/ingredient name	Result
Solvent naphtha (petroleum), light arom.	ASPIRATION HAZARD - Category 1

Information on likely routes: of exposure:

Not available.

Potential acute health effects :

Eye contact: No known significant effects or critical hazards.
Inhalation: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Skin contact: May cause an allergic skin reaction.
Ingestion: Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data.
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:
Irritation.
Redness.
Ingestion: No specific data.

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

Short term exposure:

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

Long term exposure:

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

Potential chronic health effects:

Not available.

Conclusion/Summary:

Based on available data, the classification criteria are not met.

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

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Reproductive toxicity: No known significant effects or critical hazards.

Additional information:

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
N-Butyl Acetate	Acute EC50 397 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
2-Methoxy-1-Methylethyl Acetate	Acute EC50 44 mg/l Fresh water	Daphnia spec.	48 hours
	Acute LC50 18 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 23 mg/l Fresh water	Daphnia spec.	21 days
	Acute LC50 130 mg/l Fresh water	Fish	96 hours
	Acute NOEC >1000 mg/l Chronic LC10 100 mg/l Chronic NOEC 47,5 mg/l Fresh water	Algae Daphnia spec Fish	96 hours 21 days 14 days

Conclusion/Summary:

Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate, Oligomers N-Butyl Acetate	OECD 301F	0 % - Not readily - 28 days	-	-
	-	90 % - Readily - 28 days	-	-
	OECD 301D	83 % - Readily - 28 days	-	-
	-	80 % - 5 days	-	-
2-Methoxy-1-Methylethyl Acetate	OECD 302B	100 % - Inherent - 8 days	-	-

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate, Oligomers	-	-	Not readily
N-Butyl Acetate	-	-	Readily
Solvent Naphtha (Petroleum), Light Arom.	-	-	Readily
2-Methoxy-1-Methylethyl Acetate	-	-	Readily
3-Isocyanatomethyl-3,5,5-Trimethylcyclohexyl Isocyanate	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
N-Butyl Acetate	2,3	10	Low
Solvent Naphtha (Petroleum), Light Arom.	-	10 to 2500	High
2-Methoxy-1-Methylethyl Acetate	1,2	-	Low
3-Isocyanatomethyl- 3,5,5-Trimethylcyclohexyl Isocyanate	0,99	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}):

Not available.

Mobility:

Volatile.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.





13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Methods of disposal	The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
Hazardous waste	Yes.
Waste code:	08 05 01* waste Isocyanates.
Special precautions:	This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

Labels required:

	Land transport ADR/RID	ADN	Marine transport IMDG	Air transport ICAO/IATA
14.1 UN-No	UN1263		Not regulated	Not regulated
14.2 Description of the goods	Paint		-	-
14.3 Transport hazard class(es)	3 	3 	3 	3 

Our company policy is one of continuous research and development; we therefore reserve the right to amend content herein without prior notice.

14.4 Packaging group	III		-	-
14.5 Environmental hazards	No		-	-
Additional Information	Limited quantity: ≤5L Tunnel code: (D/E)		Emergency schedules F-E;S-E Remarks: < 5L: Limited Quantity - IMDG 3.4	Quantity limitation: Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344.

14.6 Special precautions for user

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

14.7. Transport in bulk according to IMO instruments

Not applicable.

15. REGULATORY INFORMATION

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

Other EU regulations:

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

VOC:

VOC for Ready-for-Use Mixture : 2004/42/EC - IIA/i: 500g/l (2010). ≤ 300g/l VOC.

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

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

Explosive precursors : Not applicable.

United Kingdom: Great Britain:

UK (GB)/REACH:

Annex XIV - List of substances subject to authorisation:

Annex XIV:

None of the components are listed.

Substances of very high concern:

None of the components are listed.

Ozone depleting substances:

Not listed.

Prior Informed Consent (PIC):

Not listed.

Persistent Organic Pollutants:

Not listed.

Aerosol dispensers:

Seveso Directive:

This product is not controlled under the Seveso Directive.

Danger criteria:

Category:

P5c

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.

International regulations:

Stockholm Convention on Persistent Organic Pollutants:

List name	Ingredient name	Status
Not listed.		

Rotterdam Convention on Prior Informed Consent (PIC):

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals:

List name	Ingredient name	Status
Not listed.		

CN code:

3208 90 91 00.

Inventory list:

Australia:	At least one component is not listed.
Canada:	All components are listed or exempted.
China:	All components are listed or exempted.
Eurasian Economic Union:	Russian Federation inventory: Not determined
Japan:	Japan inventory (CSCL): Not determined Japan inventory (ISHL): Not determined
New Zealand:	At least one component is not listed.
Philippines:	All components are listed or exempted.
Republic of Korea:	All components are listed or exempted.
Taiwan:	All components are listed or exempted.
Thailand:	Not determined.
Turkey:	All components are listed or exempted.
United States:	Not determined.
Vietnam:	Not determined.

15.2 Chemical safety assessment

This product contains substances for which Chemical Safety Assessments are still required.

16. OTHER INFORMATION

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

Classification	Justification
Flam. Liq. 3, H226	Expert judgment
Skin Sens. 1, H317	Expert judgment
STOT SE 3, H335	Expert judgment
STOT SE 3, H336	Expert judgment
Aquatic Chronic 3, H412	Expert judgment

Full text risk and hazard codes:

H226 :Flammable liquid and vapour.
H304 :May be fatal if swallowed and enters airways.
H314 :Causes severe skin burns and eye damage.
H317 :May cause an allergic skin reaction.
H318 :Causes serious eye damage.
H330 :Fatal 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.
H411 :Toxic to aquatic life with long lasting effects.
H412 :Harmful to aquatic life with long lasting effects.
EUH066 :Repeated exposure may cause skin dryness or cracking.

Full text of classifications: [CLP/GHS]:

Acute Tox. 1	ACUTE TOXICITY - Category 1
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

Our company policy is one of continuous research and development; we therefore reserve the right to amend content herein without prior notice.

Eye Dam. 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Flam. Liq. 3 FLAMMABLE LIQUIDS - Category 3
Resp. Sens. 1 RESPIRATORY SENSITISATION - Category 1
Skin Corr. 1C SKIN CORROSION/IRRITATION - Category 1C Skin Sens. 1 SKIN SENSITISATION - Category 1
Skin Sens. 1B SKIN SENSITISATION - Category 1B
STOT SE 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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

Wording of the hazard classes:

Flam. Liq.: Flammable liquid
STOT SE: Specific target organ toxicity - single exposure
Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitization
Aquatic Chronic: Hazardous to the aquatic environment
Eye Irrit.: Serious eye irritation
Acute Tox.: Acute toxicity
STOT RE: Specific target organ toxicity - repeated exposure
Skin Corr.: Skin corrosion
Eye Dam.: Serious eye damage
Resp. Sens.: Respiratory sensitization

SDS version summary:

Version	Date of Update	Section Updated
1.1	07/08/2023	Template change

Other information:

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios.

The contents and format of this SDS are in accordance with EEC Commission Directive 1999/45/EC, 67/548/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

1. IDENTIFICATION OF THE SUBSTRATE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name/designation: Caltech Metcoat – Base.

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

Relevant identified uses: Paint.

Recommended restrictions: Reserved for industrial and professional use.

1.3 Supplier details

Alumasc Building Products Ltd
White House Works, Bold Road, Sutton, St Helens, Merseyside, United Kingdom, WA9 4JG
Tel: +44 (0)1744 648400
e-mail: technical@alumascroofing.com

1.4 Emergency telephone number

Association / Organisation: National Poisons Information Service
Emergency telephone numbers: 0344 892 0111 (Healthcare professionals only)
Other emergency telephone numbers Alumasc Building Products: +44 17 4464 8400
(Mon-Thurs – 08.30-17.00 Fri – 08.30-16.00)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Product definition:

Mixture.

Classification according to Regulation (EC) No. 1272/2008 [CLP][1]:

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

Hazard pictures:



Signal word:

Warning.

Hazardous component(s) to be indicated on label:

1,6-Hexanediyl-Bis(2-(2-(1-Ethylpentyl)-3-Oxazolidinyl)Ethyl)Carbamate
Bis(1,2,2,6,6-Pentamethyl-4-Piperidyl) Sebacate 2-Ethylhexanal
Methyl 1,2,2,6,6-Pentamethyl-4-Piperidyl Sebacate.

Hazard statements

H226 - Flammable liquid and vapour.
H317 - May cause an allergic skin reaction. H335 - May cause respiratory irritation.
H412 - Harmful to aquatic life with long lasting effects.

Supplementary statements:

EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed.
Do not breathe spray or mist.

Precautionary statements prevention:

P280 - Wear protective gloves.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Precautionary statements response:

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Precautionary statements storage: P403 + P235 - Store in a well-ventilated place. Keep cool.

Precautionary statements disposal: P501: Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

Supplemental label elements:

EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed.
Do not breathe spray or mist.

Supplemental label elements : Detergents - Regulation (EC) No 907/2006:

Not applicable.

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 requirements:

Containers to be fitted with child-resistant fastenings:
Not applicable.

Tactile warning of danger:

Not applicable.

2.3 Other hazards

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

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

Other hazards which do not result in classification:

None known.

3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

3.1 Substances

See 'Composition on ingredients' in Section 3.2.

3.2 Mixtures

United Kingdom: Great Britain:

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
2-Methoxy-1-Methylethyl Acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	≥10 - ≤25	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
1,6-Hexanediyl-Bis(2-(2-(1-Ethylpentyl)-3-Oxazolidinyl)Ethyl) Carbamate	EC: 411-700-4 CAS: 140921-24-0 Index: 616-079-00-5	≥10 - ≤25	Skin Sens. 1, H317	-	[1]
Reaction mass of Ethylbenzene and Xylene	REACH #: 01-2119488216-32 List #: 905-588-0	≤5	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304	ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]

Oxazolidine, 3-Butyl-2-(1-Ethylpentyl)-	REACH #: 01-0000017206-75 EC: 425-660-0 CAS: 165101-57-5	≤3	Aquatic Chronic 2, H411	-	[1]
Polyamine Amide Salt (72243/00/2008.0023, Germany)	List #: 935-868-8	≤3	Skin Irrit. 2, H315	-	[1]
Bis(1,2,2,6,6-Pentamethyl-4-Piperidyl) Sebacate	REACH #: 01-2119491304-40 EC: 255-437-1 CAS: 41556-26-7	≤1	Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
2-Ethylhexanal	EC: 204-596-5 CAS: 123-05-7	≤1	Flam. Liq. 3, H226 Skin Sens. 1B, H317 Repr. 2, H361	-	[1]
Methyl 1,2,2,6,6-Pentamethyl-4-Piperidyl Sebacate	EC: 280-060-4 CAS: 82919-37-7	≤0,3	Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]

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

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

Type:

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

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

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Skin contact:	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.
Ingestion:	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms:

Eye contact: No specific data.
Inhalation: No specific data.
Skin contact: Adverse symptoms may include the following:
Irritation.
Redness.
Ingestion: No specific data.

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.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Use dry chemical, CO₂, water spray (fog) or foam.

Extinguishing media which must not be used for safety reasons:

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 Dioxide.
Carbon Monoxide.
Nitrogen Oxides.

5.3 Advice for fire-fighters

Special protective actions for fire-fighters:

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

Special protective equipment for fire-fighters:

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

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

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

6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill:

Stop leak if without risk. Move containers from spill area. 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. 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.

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.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures:

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. 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. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container

Advice on general occupational hygiene:

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

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. 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.

Seveso Directive - Reporting thresholds Danger criteria.

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

7.3 Specific end use(s)

Recommendations:

Not available.

Industrial sector specific solutions:

Not available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

8.1 Control parameters

Occupational exposure limits / Biological exposure indices:

United Kingdom: Great Britain:

Product/ingredient name	Exposure limit values
2-Methoxy-1-Methylethyl Acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 548 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 274 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
Reaction mass of Ethylbenzene and Xylene	EH40/2005 WELs (United Kingdom (UK), 1/2020). [xylene, o-, m-, p- or mixed isomers] Absorbed through skin. STEL: 441 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 220 mg/m ³ 8 hours. TWA: 50 ppm 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.

DNELs/DMELs:


Product/ingredient name	Type	Exposure	Value	Population	Effects
2-Methoxy-1-Methylethyl Acetate	DNEL	Long term Inhalation	275 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	153,5 mg/ m³	Workers	Systemic
	DNEL	Long term Dermal	54,8 mg/m³	General population [Consumers]	Systemic
	DNEL	Long term Oral	1,67 mg/m³	General population [Consumers]	Systemic
	DNEL	Long term Oral	1,67 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	33 mg/m³	General population	Local
	DNEL	Long term Inhalation	33 mg/m³	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
	DNEL	Short term Inhalation	442 mg/m³	Workers	Local
	DNEL	Short term Inhalation	442 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	221 mg/m³	Workers	Local
	DNEL	Long term Inhalation	221 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	260 mg/m³	General population	Local
	DNEL	Short term Inhalation	260 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	65,3 mg/m³	General population	Local
	DNEL	Long term Inhalation	65,3 mg/m³	General population	Systemic
Reaction mass of Ethylbenzene and Xylene	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	12,5 mg/ kg bw/day	General population	Systemic

PNECs:

Product/ingredient name	Compartment Detail	Value	Method Detail
Titanium Dioxide	Fresh water	0,127 mg/l	-
	Marine	>1 mg/l	-
	Sewage treatment Plant	>100 mg/l	-
	Fresh water sediment	>1000 mg/kg	-
	Marine water sediment	>100 mg/kg	-
2-Methoxy-1-Methylethyl Acetate	Soil	100 mg/kg	-
	Fresh water	0,635 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	-

Reaction mass of Ethylbenzene and Xylene	Fresh water	0,327 mg/l	-
	Marine water	0,327 mg/l	-
	Fresh water sediment	12,46 mg/kg	-
	Marine water sediment	12,46 mg/kg	-
	Soil	2,31 mg/kg	-
	Sewage treatment Plant	6,58 mg/l	-
Xylene (mixture of Isomeres)	Fresh water	0,327 mg/l	Sensitivity Distribution
	Marine water	0,327 mg/l	Sensitivity Distribution
	Fresh water sediment	12,46 mg/kg	Equilibrium Partitioning
	Marine water sediment	12,46 mg/kg	Equilibrium Partitioning
	Soil	2,31 mg/kg	Equilibrium Partitioning
	Sewage treatment Plant	6,58 mg/l	-
Ethylbenzene	Fresh water	0,1 mg/l	-
	Marine water	0,01 mg/l	-
	Fresh water sediment	13,7 mg/kg	-
	Marine water sediment	1,37 mg/kg	-
	Soil	2,68 mg/kg	-
	Sewage treatment Plant	9,6 mg/l	-
2-Methylpropan-1-ol	Fresh water	0,4 mg/l	-
	Marine water	0,04 mg/l	-
	Sewage treatment Plant	10 mg/l	-
	Fresh water sediment	1,52 mg/kg	-
	Marine water sediment	0,125 mg/kg	-
	Soil	0,0699 mg/kg	-

8.2 Exposure controls

8.2.1. Appropriate engineering Controls:	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
8.2.2. 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye and face protection:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Use eye protection according to EN 166. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: safety glasses with side-shields.

Skin 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.
Hands 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. > 8 hours (breakthrough time): nitrile rubber gloves. The recommendation for the type or types of glove to use when handling this product is based on information from the following source: EN374. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
Body protection:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods. Recommended: 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:	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapour (Type A) (EN 140)
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.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important health, safety and environmental information

Physical state:	Liquid	Colour:	Gray
Form:	Liquid	Relative density [g/cm³]	Not available
Odour:	Not available	Temperature [°C]:	
Odour threshold:	Not available	Density:	1,601 g/cm³ [20°C (68°F) [DIN 53217]
pH:	Not applicable	Partition coefficient n-octanol/water:	Not applicable
pH : Justification:	Product is non-soluble (in water).	Auto-ignition temperature (°C):	Not relevant due to nature of the product
Melting point/freezing point (°C):	Not available	Decomposition temperature:	Not available
Flash point (°C):	Closed cup: 23°C (73,4°F) [Literature]	Viscosity (cSt):	Dynamic: 400 to 600 mPa · s [ICI Rotothinner]
Evaporation rate [kg/(s m²)]:	Not available	Explosive properties:	Not available
Explosion limits [Vol-%]	Not available	Vapour density (Air = 1):	Not available
		Solubility in water [g/l]:	Not available

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Flammability (solid, gas)	Not available	Cold water:	Not soluble
Lower Explosive Limit (%):	Not available	Hot water:	Not soluble
Upper Explosive Limit (%):	Not available	Particle Size:	Not applicable
Oxidising properties:	Not available		

Boiling range:

Ingredient name	°C	°F	Method
Reaction mass of Ethylbenzene and Xylene	136 to 145	276,8 to 293	

Vapour pressure:

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
2-Methoxy-1-Methylethyl Acetate	2,7	0,36	OECD 104			
1,6-Hexanediyl-Bis(2-(2-(1-Ethylpentyl)-3-Oxazolidinyl)Ethyl) Carbamate		Not applicable		0	0	

10. STABILITY AND REACTIVITY

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials

Reactive or incompatible with the following materials:

Oxidising materials.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Product/ingredient name	Result	Species	Dose	Exposure
2-Methoxy-1-Methylethyl Acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
	NOEL Inhalation Dusts and mists	Rat	8100 mg/m³	4 hours
Reaction mass of Ethylbenzene and Xylene	LC50 Inhalation Vapour	Rat	27124 mg/m³	4 hours
	LD50 Dermal	Rabbit	12126 mg/kg	-
Bis(1,2,2,6,6-Pentamethyl-4-Piperidyl) Sebacate	LD50 Oral	Rat	3523 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-

2-Ethylhexanal	LD50 Oral	Rat	>2000 mg/kg	-
	LD50 Dermal	Rabbit	4135 mg/kg	-
Methyl	LD50 Oral	Rat	2600 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
1,2,2,6,6-Pentamethyl- 4-Piperidyl Sebacate	LD50 Oral	Rat	>2000 mg/kg	-

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Acute toxicity estimates:

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Reaction mass of Ethylbenzene and Xylene	3523	1100	N/A	11	N/A
2-Ethylhexanal	2600	4135	N/A	N/A	N/A

Irritation/Corrosion:

Product/ingredient name	Result	Species	Score	Exposure	Observation
Polyamine Amide Salt (72243/00/2008.0023, Germany)	Eyes - Cornea opacity	Rabbit	0	-	-
	Skin - Oedema	Rabbit	2	-	-
Bis(1,2,2,6,6-Pentamethyl-4-Piperidyl) Sebacate	Skin - Oedema	Rabbit	0	-	-
2-Ethylhexanal	Skin - Mild irritant	Rabbit	-	425 milligrams	-
Methyl	Skin - Oedema	Rabbit	0	-	-
1,2,2,6,6-Pentamethyl-4-Piperidyl Sebacate					

Conclusion/Summary:

Skin: Based on available data, the classification criteria are not met.
Eyes: Based on available data, the classification criteria are not met.
Respiratory: May cause respiratory irritation. May cause drowsiness or dizziness.

Sensitisation:

Product/ingredient name	Route of exposure	Species	Result
Bis(1,2,2,6,6-Pentamethyl-4-Piperidyl) Sebacate	Skin	Guinea pig	Sensitising
Methyl 1,2,2,6,6-Pentamethyl-4-Piperidyl Sebacate	Skin	Guinea pig	Sensitising

Conclusion/Summary:

Skin: May cause an allergic skin reaction.
Respiratory: Based on available data, the classification criteria are not met.

Mutagenicity:

Product/ingredient name	Test	Experiment	Result
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	OECD 471	Experiment: In vitro Subject: Bacteria	Negative

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Carcinogenicity:

It has been observed that the carcinogenic hazard of this product arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Reproductive toxicity:

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Teratogenicity:

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
2-Methoxy-1-Methylethyl Acetate	Category 3	-	Narcotic effects
Reaction mass of Ethylbenzene and Xylene	Category 3 Category 3	- -	Respiratory tract Irritation

Specific target organ toxicity (repeated exposure):

Product/ingredient name	Category	Route of exposure	Target organs
Reaction mass of Ethylbenzene and Xylene	Category 2	-	-

Aspiration hazard:

Product/ingredient name	Result
Reaction mass of Ethylbenzene and Xylene	ASPIRATION HAZARD - Category 1

Information on likely routes: of exposure:

Not available.

Potential acute health effects:

Eye contact: No known significant effects or critical hazards.
Inhalation: No known significant effects or critical hazards.
Skin contact: May cause an allergic skin reaction.
Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics:

Eye contact: No specific data.
Inhalation: No specific data.
Skin contact: Adverse symptoms may include the following
Irritation.
Redness.
Ingestion: No specific data.

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

Short term exposure:

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

Long term exposure:

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

Potential chronic health effects:

Not available.

Conclusion/Summary:

Based on available data, the classification criteria are not met.

General: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Reproductive toxicity: No known significant effects or critical hazards.

11.2 Additional information

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
2-Methoxy-1-Methylethyl Acetate	Acute LC50 130 mg/l Fresh water	Fish	96 hours
	Acute NOEC >1000 mg/l	Algae	96 hours
	Chronic LC10 100 mg/l	Daphnia spec.	21 days
	Chronic NOEC 47,5 mg/l Fresh water	Fish	14 days
Reaction mass of Ethylbenzene and Xylene	NOEC 0,44 mg/l	Algae	72 hours
	NOEC 0,96 mg/l	Daphnia spec.	7 days
	NOEC 1,3 mg/l	Fish	56 days
	Acute EC50 1,1 mg/l	Daphnia spec.	48 hours
Oxazolidine, 3-Butyl-2-(1-Ethylpentyl)-	Acute IC50 5,6 mg/l	Algae	72 hours
	Acute LC50 20 mg/l	Fish	96 hours
	Acute LC50 70 mg/l	Fish	48 hours
	Acute EC50 1,68 mg/l	Aquatic plants - Desmodesmus subspicatus	72 hours
Polyamine Amide Salt (72243/00/2008.0023, Germany)	Acute EC50 >100 mg/l	Bacteria	3 hours
	Acute EC50 20 mg/l	Daphnia spec	24 hours
	Acute LC50 0,97 mg/l	Fish	96 hours
	Acute LC50 7,9 mg/l	Fish	96 hours
Bis(1,2,2,6,6-Pentamethyl-4-Piperidyl) Sebacate	Chronic NOEC 1 mg/l	Daphnia spec.	21 days
	Acute EC50 1,68 mg/l	Aquatic plants - Desmodesmus subspicatus	72 hours
	Acute EC50 >100 mg/l	Bacteria	3 hours
	Acute EC50 20 mg/l	Daphnia spec	24 hours
Methyl 1,2,2,6,6-Pentamethyl-4-Piperidyl Sebacate	Acute LC50 0,97 mg/l	Fish	96 hours
	Acute LC50 7,9 mg/l	Fish	96 hours
	Chronic NOEC 1 mg/l	Daphnia spec	21 days
	Chronic NOEC 1 mg/l	Daphnia spec	21 days

Conclusion/Summary:

Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
2-Methoxy-1-Methylethyl Acetate	OECD 302B	100 % - Inherent - 8 days	-	-
Polyamine Amide Salt (72243/00/2008.0023, Germany)	-	88 % - Readily - 4 days	-	-
Bis(1,2,2,6,6-Pentamethyl- 4-Piperidyl) Sebacate	OECD 301F	38 % - Not readily - 28 days	-	-
Methyl 1,2,2,6,6-Pentamethyl- 4-Piperidyl Sebacate	OECD 301F	38 % - Not readily - 28 days	-	-

Conclusion/Summary:

Based on available data, the classification criteria are not met.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-Methoxy-1-Methylethyl Acetate	-	-	Readily
Polyamine Amide Salt (72243/00/2008.0023, Germany)	-	-	Readily
Bis(1,2,2,6,6-Pentamethyl- 4-Piperidyl) Sebacate	-	-	Not readily
Methyl 1,2,2,6,6-Pentamethyl- 4-Piperidyl Sebacate	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
2-Methoxy-1-Methylethyl Acetate	1,2	-	Low
Bis(1,2,2,6,6-Pentamethyl- 4-Piperidyl) Sebacate	2.4 To 2.8	-	Low
2-Ethylhexanal	3,07	-	Low
Methyl 1,2,2,6,6-Pentamethyl- 4-Piperidyl Sebacate	2.4 To 2.8	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}): Not available.
Mobility: Volatile,

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.





13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Methods of disposal:	The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
Hazardous waste	Yes.
Waste code:	08 01 11* waste paint and varnish containing organic solvents or other hazardous substances.
Special precautions	This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

Labels required:

	Land transport ADR/RID	ADN	Marine transport IMDG	Air transport ICAO/IATA
14.1 UN-No	UN1263		Not regulated.	Not regulated.
14.2 Description of the goods	Paint		-	-
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packaging group	III		-	-
14.5 Environmental hazards	No		-	-
Additional Information	Viscous liquid exception This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.2.3.1.5.1. Tunnel code (D/E)	Viscous liquid exception This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.2.3.1.5.1.	Emergency schedules F-E, S-E viscous liquid exception This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.3.2.5.	Quantity limitation Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344.

14.6 Special precautions for user

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

14.7 Transport in bulk according to IMO instruments

Not applicable.

15. REGULATORY INFORMATION

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

Other EU regulations:

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

VOC:

VOC for Ready-for-Use Mixture : 2004/42/EC - IIa/i: 500g/l (2010). <= 300g/l VOC.

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

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

Explosive precursors : Not applicable.

United Kingdom: Great Britain:

UK (GB)/REACH:

Annex XIV - List of substances subject to authorisation#:

Annex XIV:

None of the components are listed.

Substances of very high concern:

None of the components are listed.

Ozone depleting substances:

Not listed.

Prior Informed Consent (PIC):

Not listed.

Persistent Organic Pollutants:

Not listed.

Aerosol dispensers:

Seveso Directive:

This product is not controlled under the Seveso Directive.

Danger criteria:

Category:

P5c.

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.

International regulations:

Stockholm Convention on Persistent Organic Pollutants:

List name

Ingredient name

Status

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC):

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals:

List name

Ingredient name

Status

Not listed.

CN code:

3208 90 91 00.

Inventory list:

Australia :

Canada:

China:

Eurasian Economic Union:

Japan:

New Zealand:

Philippines:

Republic of Korea:

Taiwan:

Thailand:

At least one component is not listed.

All components are listed or exempted.

All components are listed or exempted.

Russian Federation inventory: Not determined

Japan inventory (CSCL): Not determined

Japan inventory (ISHL): Not determined

At least one component is not listed.

All components are listed or exempted.

All components are listed or exempted.

All components are listed or exempted.

Not determined.

Turkey: All components are listed or exempted.
United States: Not determined.
Viet Nam: Not determined.

15.2 Chemical safety assessment

This product contains substances for which Chemical Safety Assessments are still required.

16. OTHER INFORMATION

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

Classification	Justification
Flam. Liq. 3, H226	Expert judgment
Skin Sens. 1, H317	Expert judgment
Aquatic Chronic 3, H412	Expert judgment

Full text risk and hazard codes:

H226: Flammable liquid and vapour.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction. H319 Causes serious eye irritation.
H332: Harmful if inhaled.
H335: May cause respiratory irritation. H336 May cause drowsiness or dizziness.
H361: Suspected of damaging fertility or the unborn child.
H373: May cause damage to organs through prolonged or repeated exposure.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects. 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. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
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 Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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

Wording of the hazard classes:

Flam. Liq.: Flammable liquid
STOT SE: Specific target organ toxicity - single exposure
Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitization
Aquatic Chronic: Hazardous to the aquatic environment
Eye Irrit.: Serious eye irritation

Acute Tox.: Acute toxicity
STOT RE: Specific target organ toxicity - repeated exposure
Skin Corr.: Skin corrosion
Eye Dam.: Serious eye damage
Resp. Sens.: Respiratory sensitization

SDS version summary:

Version	Date of Update	Section Updated
1.1	07/08/2023	Template Change

Other information:

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios.

The contents and format of this SDS are in accordance with EEC Commission Directive 1999/45/EC, 67/548/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

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