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: Paint hardener.

Recommended restrictions: Reserved for industrial and professional use.
Contains Isocyanates.

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 numbersAlumasc 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

Classification according to Regulation (EC) No. 1272/2008 [CLP][1]:
Flam. Liq. 3, H226, Acute Tox. 4, H332, Skin Sens. 1, H317, STOT 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.

Hazard statements:
H226 - Flammable liquid and vapour.
H317 - May cause an allergic skin reaction.
H332 - Harmful if inhaled.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H412 - Harmful to aquatic life with long lasting effects.

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.

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.

Storage:
P403 + P235 - Store in a well-ventilated place. Keep cool.

Disposal:	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients:	Hexamethylene Diisocyanate, Oligomers N-Butyl Acetate, Hexamethylene-Di-Isocyanate.
Supplementary statements:	EUH204 - Contains isocyanates. May produce an allergic reaction.

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:
Not applicable.

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

Tactile warning of danger:
Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification:
None known.

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
Hexamethylene Diisocyanate, Oligomers	REACH #: 01-2119485796-17 CAS: 28182-81-2	≥75 - ≤90	Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335	ATE [Inhalation (Dusts and Mists)] = 1,5 mg/l	[1] [2]
N-Butyl Acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≥10 - ≤25	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	-	[1] [2]
Hydrocarbons, Aromatic, C9	EC: 265-199-0 CAS: 64742-95-6 Index: 649-356-00-4	≤5	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	-	[1]
Hexamethylene-Di-Isocyanate	REACH #: 01-2119457571-37 EC: 212-485-8 CAS: 822-06-0 Index: 615-011-00-1	≤0,1	Acute Tox. 4, H302 Acute Tox. 1, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335	ATE [Oral] = 500 mg/kg ATE [Inhalation (vapours)] = 0,05 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.
List numbers have no legal significance.
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: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison centre or physician. 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.

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 necessary, call a poison centre or physician. 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 MEASSURES

5.1 Extinguishing media

Suitable extinguishing media:
Use dry chemical, CO_2, 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. ACCIDENTIAL 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill:
Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non- combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

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)

Recommendation:
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
Hexamethylene Diisocyanate, Oligomers	**EH40/2005 WELs (United Kingdom (UK), 1/2020). Inhalation sensitiser** STEL: 0,07 mg/m³, (as -NCO) 15 minutes TWA: 0,02 mg/m³, (as -NCO) 8 hours
N-Butyl Acetate	**EH40/2005 WELs (United Kingdom (UK), 1/2020). Inhalation sensitiser** STEL: 966 mg/m³ 15 minutes STEL: 200 ppm 15 minutes TWA: 724 mg/m³ 8 hours TWA: 150 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
Hexamethylene Diisocyanate, Oligomers	DNEL	Short term Inhalation	1 mg/m³	Workers	Local
	DNEL	Long term Inhalation	0,5 mg/m³	Workers	Local
	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
N-Butyl Acetate	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
Hydrocarbons, Aromatic, C9	DNEL	Long term Dermal	3,4 mg/kg bw/day	General population [consumers]	Systemic
	DNEL	Long term Dermal	25 mg/kg	Workers	Systemic
	DNEL	Long term Inhalation	150 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	11 mg/kg	General population	Systemic
	DNEL	Long term Inhalation	32 mg/m³	General population	Systemic
Hexamethylene-Di-Isocyanate	DNEL	Long term Oral	11 mg/kg	General population	Systemic
	DNEL	Short term Inhalation	1 mg/m³	Workers	Local
	DNEL	Long term Inhalation	0,5 mg/m³	Workers	Local
	DNEL	Long term Inhalation	0,35 mg/m³	Workers	Local
	DNEL	Short term Inhalation	0,7 mg/m³	Workers	Local

PNECs:

Product/ingredient name	Compartment Detail	Value	Method Detail
Hexamethylene diisocyanate, oligomers	Fresh water	0,199 mg/l	-
	Marine	0,0199 mg/l	-
	Fresh water sediment	44551 mg/kg dwt	-
	Marine water sediment	4455 mg/kg dwt	-
	Soil	8884 mg/kg dwt	-
	Sewage treatment plant	100 mg/l	-
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	-
Hexamethylene-Di-Isocyanate	Fresh water	0,127 mg/l	-
	Marine	0,0127 mg/l	-
	Sediment	266700 mg/kg dwt	-
	Soil	53182 mg/kg dwt	-
	Sewage treatment plant	38,28 mg/l	-
	Fresh water	>0,05 mg/l	-
	Fresh water sediment	>1,33 mg/kg	-
	Marine water	>0,005 mg/l	-
	Marine water sediment	>0,133 mg/kg	-
	Sewage treatment plant	55,6 mg/l	-
	Soil	>0,066 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 (0.5mm) 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 141).
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important health, safety and environmental information

Physical state:	Liquid	**Colour:**	Colourless.
Form:	Liquid	**Relative density [g/cm³] Temperature [°C]:**	Not available
Odour:	Solvent-like	**Density:**	1,04 to 1,1 g/cm³ [20°C (68°F)] [DIN 53217]
Odour threshold:	Not available	**Partition coefficient n-octanol/water:**	Not applicable
pH:	Not applicable	**Auto-ignition temperature (°C):**	460°C (860°F) [Literature]
pH : Justification:	Product is non-soluble (in water)	**Decomposition temperature:**	Not available
Melting point/freezing point (°C):	Not available.	**Viscosity (cSt):**	Dynamic: 250 mPa·s Kinematic: 227 to 240 mm2/s
Initial boiling point and boiling range (°C):	139°C (282,2°F) [Literature]	**Explosive properties:**	Not available
Flash point (°C):	Closed cup: 27°C (80,6°F) [Literature]	**Vapour pressure (kPa):**	1 kPa (7,50061 mm Hg) [room temperature] 3 kPa (22,50185 mm Hg) [50°C (122°F)]
Evaporation rate [kg/(s m²)]:	Not available	**Vapour density (Air = 1):**	Not available
Explosion limits [Vol-%]:	Not available		
Flammability (solid, gas):	Not available	**Solubility in water [g/l]:**	Not applicable
Lower Explosive Limit (%):	1,1%	**Cold water:**	Not soluble
Upper Explosive Limit (%):	10,8%	**Hot water:**	Not soluble
Oxidising properties:	Not available	**Median Particle size:**	Not applicable

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
Hexamethylene Diisocyanate, Oligomers	LC50 Inhalation Dusts and Mists	Rat	18500 mg/m³	1 hours
	LC50 Inhalation Dusts and Mists	Rat - Female	390 mg/m³	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
N-Butyl Acetate	LC50 Inhalation Dusts and Mists	Rat – Male/ Female	23,4 mg/l	4 hours
	LC50 Inhalation Vapour	Rat	>21 mg/l	4 hours
	LC50 Inhalation Vapour	Rat	9700 mg/m³	4 hours
	LD50 Oral	Rat	14000 mg/kg	-
Hydrocarbons, Aromatic, C9	LD50 Oral	Mouse	8400 mg/kg	-
	LD50 Oral	Rat	8400 mg/kg	-
Hexamethylene-Di-Isocyanate	LC50 Inhalation Dusts and Mists	Rat	0,124 mg/m³	4 hours
	LCLo Inhalation Dusts and Mists	Rat	60 mg/m³	4 hours
	LD50 Dermal	Rabbit	>7000 mg/kg	-

Conclusion/Summary:
Harmful if inhaled.

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)
Unicover Ultra - Activator	N/A	N/A	N/A	11	N/A
Hexamethylene Diisocyanate, Oligomers	N/A	N/A	N/A	N/A	1,5
N-Butyl Acetate	N/A	N/A	N/A	N/A	23,4
Hydrocarbons, Aromatic, C9	8400	N/A	N/A	N/A	N/A
Hexamethylene-Di-Isocyanate	500	N/A	N/A	0,05	N/A

Irritation/Corrosion:

Product/ingredient name	Result	Species	Score	Exposure	Observation
Hexamethylene Diisocyanate, Oligomers	Eyes - Cornea opacity	Rabbit	1	-	-
	Eyes - Moderate irritant	Rabbit	-	100 milligrams 4 hours	-
	Skin – Oedema	Rabbit	1	500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 microliters	-
Hydrocarbons, Aromatic, C9	Eyes - Mild irritant	Rabbit	-	-	-
Hexamethylene-Di-Isocyanate	Eyes - Redness of the Conjunctivae	Rabbit	3	-	-
	Skin - Erythema/Eschar	Rabbit	3		-

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
Hexamethylene Diisocyanate, Oligomers	Respiratory	Guinea pig	Not sensitizing
	Skin	Guinea pig	Sensitising
	Skin	Mouse	Sensitising
Hexamethylene-Di-Isocyanate	Respiratory	Guinea pig	Sensitising
	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
Hexamethylene Diisocyanate, Oligomers	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 406 Skin Sensitization	Subject: Mammalian-Animal	Positive
	OECD 405 Acute eye irritation / corrosion	Subject: Mammalian-Animal	Negative
Hydrocarbons, Aromatic, C9	OECD 471	Subject: Bacteria	Negative
		Experiment: In vitro	Negative
Hexamethylene-Di-Isocyanate	OECD 471	Subject: Bacteria	
		Experiment: In vitro	Negative
	OECD 476	Subject: Mammalian-Animal	
		Experiment: In vivo	Negative
	OECD 474	Subject: Mammalian-Animal	

Conclusion/Summary:
Based on available data, the classification criteria are not met.

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

Reproductive toxicity:

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Hydrocarbons, aromatic, C9	-	-	Negative	Mammal - species unspecified	Route of exposure unreported	-

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
Unicover Ultra - Activator	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Hexamethylene Diisocyanate, Oligomers	Category 3	-	Respiratory tract irritation
N-Butyl Acetate	Category 3	-	Narcotic effects
Hydrocarbons, Aromatic, C9	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Hexamethylene-Di-Isocyanate	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure):
Not available.

Aspiration hazard:

Product/ingredient name	Result
Hydrocarbons, Aromatic, C9	ASPIRATION HAZARD - Category 1

Information on likely routes: of exposure:
Routes of entry anticipated: Oral, dermal, inhalation.

Potential acute health effects:
Eye contact: No known significant effects or critical hazards.
Inhalation: Harmful if inhaled. 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:

Product/ingredient name	Result	Species	Dose	Exposure
Hexamethylene Diisocyanate, Oligomers	Sub-chronic LC50 Inhalation Dusts and Mists	Rat	14,7 mg/m³	6 hours; 5 days per week Intermittent
	Sub-acute LC50 Inhalation Dusts and Mists	Rat	89,9 mg/m³	6 hours; 5 days per week Intermittent
	Sub-acute LCLo Inhalation Dusts and Mists	Rat	4,3 mg/m³	6 hours; 5 days per week Intermittent
Hexamethylene-Di-Isocyanate	Chronic LCLo Inhalation vapour	Rat	0,025 p.p.m.	30 days; 6 hours per day Intermittent

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
Hexamethylene Diisocyanate, Oligomers	Acute EC50 3828 mg/l	Bacteria	3 hours
	Acute EC50 >100 mg/l Acute IC50 >1000 mg/l	Daphnia spec. Algae - Scenedesmus subspicatus	48 hours 72 hours
	Acute LC50 >100 mg/l	Fish	96 hours
N-Butyl Acetate	Acute EC50 397 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 44 mg/l Fresh water Acute LC50 18 mg/l Fresh water Chronic NOEC 23 mg/l Fresh water	Daphnia spec. Fish - Pimephales promelas Daphnia spec	48 hours 96 hours 21 days
Hexamethylene-Di-Isocyanate	Acute EC50 >77,4 mg/l Acute EC50 842 mg/l	Algae Bacteria	72 hours 3 hours

Conclusion/Summary:
Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Hexamethylene Diisocyanate, Oligomers	OECD 301C	1 % - Not readily - 28 days	-	-
N-Butyl Acetate	- OECD 301D	 90 % - Readily - 28 days	 -	 -
	-	83 % - Readily - 28 days	-	-
	OECD 301F	80 % - 5 days	-	-
Hexamethylene-Di-Isocyanate	EU 301F Ready Biodegradability - Manometric Respirometry Test	42 % - 10 days 42 % - 28 days	- -	- -

Conclusion/Summary:
This product has not been tested for biodegradation. Based on available data, the classification criteria are not met.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Hexamethylene Diisocyanate, Oligomers	Fresh water 0,32 days, 23°C	50%; 0.43 day(s)	Not readily
N-Butyl Acetate	-	-	Readily
Hydrocarbons, Aromatic, C9	-	-	Readily
Hexamethylene-Di-Isocyanate	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Hexamethylene Diisocyanate, Oligomers	5,54	367,7	Low
N-Butyl Acetate	2,3	10	Low
Hydrocarbons, Aromatic, C9	3.7 to 4.5	-	High
Hexamethylene-Di-Isocyanate Isocyanate	0,02	57,63	Low

12.4 Mobility in soil

Soil/water partition coefficient (KOC): 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 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal Considerations:	Disposal of this product and its packaging must comply with all applicable environmental protection and waste disposal legislation, including any requirements set by local authorities. Any unwanted or non-recyclable material should be disposed of through a licensed waste disposal contractor. Transportation of such waste may be subject to ADR (International Carriage of Dangerous Goods by Road) regulations and must be managed in accordance with those requirements.
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. Caution should be exercised when handling empty containers that have not been properly cleaned or rinsed, as they may retain hazardous residues. Spillage and wash water from cleaning tools must be prevented from entering soil, watercourses, drains, or sewer systems. Empty containers should be directed to authorised waste disposal or appropriate local recycling facilities.
Further information available via:	https://www.alumascroofing.com/downloads/disposal-guides/

14. TRANSPORT INFORMATION

Labels required:

	ADR/RID	**ADN**	**IMDG**	**IATA**
14.1 UN-No	UN1866	UN1866	UN1866	UN1866
14.2 Description of the goods	Resin solution, flammable	Resin solution, f flammable	Resin solution, flammable	Resin solution, flammable
14.3 Transport hazard class(es)	 3	 3	 3	 3
14.4 Packaging group	III	III	III	III
14.5 Environmental hazards	No	No	No	No
Additional information	**Limited quantity** 5L **Tunnel code** (D/E)	**Remarks** : < 5L: Limited Quantity	**Emergency schedules** F-E, S-E **Special provisions** 223, 955 **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. **Special provisions** A3

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

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

Product/ingredient name	**%**	**Designation [Usage]**
Hexamethylene-Di-Isocyanate	≤0,1	74

Labelling:

Other EU regulations:
VOC for Ready-for-Use Mixture: 2004/42/EC - IIA/j: 500g/l (2010). <= 470g/l VOC.

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

Seveso Directive:
This product is not controlled under the Seveso Directive.

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:	At least one component is not listed.
China:	At least one component is not listed.
Eurasian Economic Union:	Russian Federation inventory: Not determined
Japan:	Japan inventory (CSCL): At least one component is not listed. Japan inventory (ISHL): At least one component is not listed.
New Zealand:	At least one component is not listed.
Philippines:	At least one component is not listed.
Republic of Korea:	At least one component is not listed.
Taiwan:	At least one component is not listed.
Thailand:	Not determined.
Turkey:	Not determined.
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

Full text risk and hazard codes:
H226 Flammable liquid and vapour
H302 Harmful if swallowed
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
H319 Causes serious eye irritation
H330 Fatal if inhaled
H331 Toxic if inhaled
H332 Harmful if inhaled
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
H361 Suspected of damaging fertility or the unborn child
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child
H372 Causes damage to organs through prolonged or repeated exposure
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
H413 May cause long lasting harmful effects to aquatic life
EUH071 Corrosive to the respiratory tract

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	04/08/2023	Template change
1.2	08/03/2024	Product update
2.0	27/05/2025	Section 13 update

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 numbersAlumasc 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

Classification according to Regulation (EC) No. 1272/2008 [CLP][1]:
Flam. Liq. 3, H226, Acute Tox. 4, H332, Skin Sens. 1, H317, STOT 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.

Hazard statements:
H226 - Flammable liquid and vapour.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.
H373 - May cause damage to organs through prolonged or repeated exposure.

Prevention:
P280 - Wear protective gloves.
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.
P260 - Do not breathe vapour.

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

Storage:
P403 + P235 - Store in a well-ventilated place. Keep cool.

Disposal:
P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients: 2-Methoxy-1-Methylethyl Acetate, Xylene (Mixture of Isomeres), N-Butyl Acetate.

Supplementary statements: 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:
Not applicable.

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

Tactile warning of danger:
Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification:
None known.

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]
Xylene (Mixture of Isomeres)	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7	≥10 - ≤25	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 (oral, inhalation) Asp. Tox. 1, H304	ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
N-Butyl Acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≤5	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	-	[1] [2]
Hydrocarbons, Aromatic, C9	REACH #: 01-2119455851-35 EC: 918-668-5	≤3	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	-	[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.
This mixture contains ≥ 1% of titanium dioxide. The Annex VI classification of titanium dioxide does not apply to this mixture according to Note 10.
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: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. 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 it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison centre or physician. 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.

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 necessary, call a poison centre or physician. 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.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms:

Eye contact: Adverse symptoms may include the following:
Pain or irritation,
Watering,
Redness.

Inhalation: Adverse symptoms may include the following:
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:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments:
No specific treatment.

5. FIRE-FIGHTING MEASSURES

5.1 Extinguishing media

Suitable extinguishing media:
Use dry chemical, CO_2, 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.

Hazardous combustion products:
Decomposition products may include the following materials:
- Carbon Dioxide.
- Carbon Monoxide.
- Metal Oxide/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. ACCIDENTIAL 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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).

6.3 Methods and material for containment and cleaning up

Small spill:
Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill:
Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach 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). Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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)

Recommendation:
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/m³ 15 minutes STEL: 100 ppm 15 minutes TWA: 274 mg/m³ 8 hours TWA: 50 ppm 8 hours
Xylene (Mixture of Isomeres)	**EH40/2005 WELs (United Kingdom (UK), 1/2020). [xylene, o-,m-, p- or mixed Isomers] absorbed through skin** STEL: 441 mg/m³ 15 minutes STEL: 100 ppm 15 minutes TWA: 220 mg/m³ 8 hours TWA: 50 ppm 8 hours
N-Butyl Acetate	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** STEL: 966 mg/m³ 15 minutes STEL: 200 ppm 15 minutes TWA: 724 mg/m³ 8 hours TWA: 150 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	Long term Dermal	796 mg/kg	Workers	Systemic
	DNEL	Long term Dermal	320 mg/kg	General population	Systemic
	DNEL	Long term Oral	36 mg/kg	General population	Systemic
Xylene (Mixture of Isomeres)	DNEL	Short term Inhalation	442 mg/m³	Workers	Local
	DNEL	Long term Inhalation	221 mg/m³	Workers	Local
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	65,3 mg/m³	General population	Systemic

	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	125 mg/kg bw/day	General population	Systemic
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
Hydrocarbons, Aromatic, C9	DNEL	Long term Inhalation	150 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	25 mg/kg	Workers	Systemic
	DNEL	Long term Dermal	11 mg/kg	General population	Systemic
	DNEL	Long term Inhalation	32 mg/m³	General population	Systemic
	DNEL	Long term Oral	11 mg/kg	General population	Systemic

PNECs:

Product/ingredient name	Compartment Detail	Value	Method Detail
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	-
	Marine water	0,0635 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	-
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	-

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 (0.5mm). 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 141).

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important health, safety and environmental information

Physical state:	Liquid	**Colour:**	Various
Form:	Liquid	**Relative density [g/cm³] Temperature [°C]:**	Not available
Odour:	Not available	**Density:**	1,353 to 1,413 g/cm³ [DIN 53217]
Odour threshold:	Not available	**Partition coefficient n-octanol/water:**	Not applicable
pH:	Not applicable	**Auto-ignition temperature (°C):**	Not relevant due to nature of the product.
pH : Justification:	Product is non-polar/aprotic	**Decomposition temperature:**	Not available
Melting point/freezing point (°C):	Not available.	**Viscosity (cSt):**	Dynamic (room temperature): 620 to 680 mPa·s [ICI Rotothinner] Kinematic (room temperature): 439 to 503 mm2/s [calculated.] Kinematic (40°C): >20,5 mm2/s [Literature]
Initial boiling point and boiling range (°C):	Not available.	**Explosive properties:**	Not available

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

Flash point (°C):	Closed cup: 24°C (75,2°F) [Literature]	**Vapour pressure (kPa):**	See below

Ingredient name	**Vapour Pressure at 20˚C**			**Vapour pressure at 50˚C**		
	mm Hg	**kPa**	**Method**	**mm Hg**	**kPa**	**Method**
Xylene (Mixture of Isomeres)	6,7	0,89		30	4	
2-Methoxy-1-Methylethyl Acetate	2,7	0,36	OECD 104			

Evaporation rate [kg/(s m²)]:	Not available	**Vapour density (Air = 1):**	Not available
Explosion limits [Vol-%]:	Not available	**Solubility in water [g/l]:**	Not applicable.
Flammability (solid, gas):	Not available	**Median Particle size:**	Not applicable
Oxidising properties:	Not available		

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
Xylene (Mixture of Isomeres)	LC50 Inhalation Gas	Rat	5000 ppm	4 hours
	LC50 Inhalation Gas	Rat	6670 ppm	4 hours
	LC50 Inhalation Vapour	Rat	29091 mg/m³	4 hours
	LD50 Dermal	Rabbit	4,2 g/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
	TDLo Dermal	Rabbit	4300 mg/kg	-
N-Butyl Acetate	LC50 Inhalation Dusts and Mists	Rat – Male / Female	23,4 mg/l	4 hours
	LC50 Inhalation Vapour	Rat	>21 mg/l	4 hours
	LC50 Inhalation Vapour	Rat	9700 mg/m³	4 hours
	LD50 Oral	Rat	14000 mg/kg	-
Hydrocarbons, Aromatic, C9	LD50 Oral	Rat	8400 mg/kg	-

Conclusion/Summary:
Harmful if inhaled.

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)
Xylene (Mixture of Isomeres)	4300	1100	N/A	11	N/A
N-Butyl Acetate	N/A	N/A	N/A	N/A	23,4
Hydrocarbons, Aromatic, C9	8400	N/A	N/A	N/A	N/A

Irritation/Corrosion:

Product/ingredient name	Result	Species	Score	Exposure	Observation
Xylene (Mixture of Isomeres)	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	-	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Hydrocarbons, Aromatic, C9	Eyes - Mild irritant	Rabbit	-	24 hours 100 Ul	-

Conclusion/Summary

Skin: Causes skin irritation.
Eyes: Causes serious eye irritation.
Respiratory: May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.

Sensitisation:

Conclusion/Summary:
Skin: Based on available data, the classification criteria are not met.
Respiratory: Based on available data, the classification criteria are not met.

Mutagenicity:

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.

Reproductive toxicity:

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Hydrocarbons, Aromatic, C9	-	-	Negative	Mammal - species unspecified	Route of exposure unreported	-

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
Unicover Ultra - Base	Category 3	-	Narcotic effects
2-Methoxy-1-Methylethyl Acetate	Category 3	-	Narcotic effects
Xylene (Mixture of Isomeres)	Category 3	-	Respiratory tract irritation
N-Butyl Acetate	Category 3	-	Narcotic effects
Hydrocarbons, Aromatic, C9	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure):

Product/ingredient name	Category	Route of exposure	Target organs
Unicover Ultra - Base	Category 2	-	-
Xylene (Mixture of Isomeres)	Category 2	Oral, inhalation	-

Aspiration hazard:

Product/ingredient name	Result
Xylene (Mixture of Isomeres)	ASPIRATION HAZARD - Category 1
Hydrocarbons, Aromatic, C9	ASPIRATION HAZARD - Category 1

Information on likely routes: of exposure:
Not available.

Potential acute health effects:
Eye contact: Causes serious eye irritation.
Inhalation: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact: Causes skin irritation.
Ingestion: Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics:
Eye contact: Adverse symptoms may include the following:
Pain or irritation.
Watering.
Redness.

Inhalation:	Adverse symptoms may include the following: 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:

Conclusion/Summary:
Based on available data, the classification criteria are not met.
General: May cause damage to organs through prolonged or repeated exposure.
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
Xylene (Mixture of Isomeres)	Acute EC50 1,3 mg/l Fresh water	Algae	72 hours
	Acute LC50 1 mg/l Fresh water	Daphnia spec	24 hours
	Acute NOEC 0,44 mg/l	Algae	72 hours
	Chronic NOEC 0,96 mg/l Fresh water	Daphnia spec	21 days
	Acute EC50 397 mg/l Fresh water	Algae – Desmodesmus subspicatus	72 hours
N-Butyl 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

Conclusion/Summary:
Based on available data, the classification criteria are not met.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
2-Methoxy-1-Methylethyl Acetate	OECD 302B	100 % - Inherent - 8 days	-	-
Xylene (Mixture of Isomeres)	-	90 % - Readily - 5 days	-	-
	OECD 301F	87,8 % - 28 days	-	-
	-	90 % - Readily - 28 days	-	-
N-Butyl Acetate	OECD 301D	83 % - Readily - 28 days	-	-
	-	80 % - 5 days	-	-

Conclusion/Summary:
This product has not been tested for biodegradation. Based on available data, the classification criteria are not met.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-Methoxy-1-Methylethyl Acetate	-	-	Readily
Xylene (Mixture of Isomeres)	-	-	Readily
N-Butyl Acetate	-	-	Readily
Hydrocarbons, Aromatic, C9	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
2-Methoxy-1-Methylethyl Acetate	1,2	-	Low
Xylene (Mixture of Isomeres)	3,12	8.1 to 25.9	Low
N-Butyl Acetate	2,3	10	Low
Hydrocarbons, Aromatic, C9	3.7 to 4.5	10 to 2500	High

12.4 Mobility in soil

Soil/water partition coefficient (KOC): 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 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal Considerations:	Disposal of this product and its packaging must comply with all applicable environmental protection and waste disposal legislation, including any requirements set by local authorities. Any unwanted or non-recyclable material should be disposed of through a licensed waste disposal contractor. Transportation of such waste may be subject to ADR (International Carriage of Dangerous Goods by Road) regulations and must be managed in accordance with those requirements.
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. Caution should be exercised when handling empty containers that have not been properly cleaned or rinsed, as they may retain hazardous residues. Spillage and wash water from cleaning tools must be prevented from entering soil, watercourses, drains, or sewer systems. Empty containers should be directed to authorised waste disposal or appropriate local recycling facilities.

Further information available via:	https://www.alumascroofing.com/downloads/disposal-guides/

14. TRANSPORT INFORMATION

Labels required:

	ADR/RID	ADN	IMDG	IATA
14.1 UN-No	UN1263	UN1263	UN1263	UN1263
14.2 Description of the goods	Paint	Paint	Paint	Paint
14.3 Transport hazard class(es)	 3	 3	 3	 3
14.4 Packaging group	III	III	III	III
14.5 Environmental hazards	No	No	No	No
Additional information	Limited quantity 5L Special provisions 163, 367, 650 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)	Special provisions 163, 367, 650 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. Remarks : < 5L: Limited Quantity	Emergency schedules F-E;S-E Special provisions 163, 223, 367, 955 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. 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. Special provisions A3, A72, A192

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

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles:
No listed substance.

Labelling:

Other EU regulations:
VOC for Ready-for-Use Mixture: 2004/42/EC - IIA/j: 500g/l (2010). <= 470g/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.

Seveso Directive:
This product is not controlled under the Seveso Directive.

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:	At least one component is not listed.
China:	At least one component is not listed.
Eurasian Economic Union:	Russian Federation inventory: Not determined
Japan:	Japan inventory (CSCL): At least one component is not listed. Japan inventory (ISHL): At least one component is not listed.
New Zealand:	At least one component is not listed.
Philippines:	At least one component is not listed.
Republic of Korea:	At least one component is not listed.
Taiwan:	At least one component is not listed.
Thailand:	Not determined.
Turkey:	Not determined.
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

Full text risk and hazard codes:
H226 Flammable liquid and vapour
H302 Harmful if swallowed
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
H319 Causes serious eye irritation
H330 Fatal if inhaled
H331 Toxic if inhaled
H332 Harmful if inhaled
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
H361 Suspected of damaging fertility or the unborn child
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child
H372 Causes damage to organs through prolonged or repeated exposure
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
H413 May cause long lasting harmful effects to aquatic life
EUH071 Corrosive to the respiratory tract

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	04/08/2023	Template change
1.2	08/03/2024	Product update
2.0	27/05/2025	Section 13 update

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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