

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

1.1 Product identifier

Trade name/designation: Caltech METprime - Part A.

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

Main use category: Industrial uses / Primer.

1.3 Manufacturer/Supplier

Supplier:
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 Manufacturer/Supplier

Emergency telephone: 01744 648 400 - (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:

Skin Irrit. 2, H315 : Eye Irrit. 2, H319 : Skin Sens. 1, H317 : Aquatic Chronic 2, H411.

Ingredients of unknown toxicity:

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 Labelling according to Regulation (EU) 1272/2008

Hazard pictures:



Signal word: Warning.

Hazard statements:
Causes serious eye irritation.
Causes skin irritation.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

Precautionary statements:

General: Not applicable

Prevention: P280: Wear protective gloves and eye protection:
- neoprene gloves and safety glasses with side-shields.

Response: P302: IF ON SKIN:
P352: Wash with plenty of soap and water.
P333: If skin irritation or rash occurs:
P313: Get medical attention.

Storage: Not applicable.

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

Hazardous ingredients: Bisphenol-A-Epoxy Resin Avg.Mol.Wght. ≤700 and 1,6-Bis(2,3-Epoxypropoxy)Hexane).
Supplemental label elements: Contains epoxy constituents. May produce an allergic reaction.

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

Not applicable.

Special packaging requirements:

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.

The mixture may be a skin sensitiser. It may also be a skin irritant and repeated contact may increase this effect. The mixture may be a skin sensitiser. It may also be a severe skin irritant.

3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

3.1 Mixture

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
Bisphenol-A-Epoxy Resin Avg.Mol.Wght. ≤700	REACH #: 01-2119456619-26 EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8	≥10 - ≤25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
Benzyl Alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥10 - ≤25	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	[1]
Trizinc Bis (Orthophosphate)	REACH #: 01-2119485044-40 EC: 231-944-3 CAS: 7779-90-0 Index: 030-011-00-6	≤10	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
1,6-Bis (2,3-Epoxypropoxy) Hexane	REACH #: 01-2119463471-41 EC: 240-260-4 CAS: 16096-31-4	≤5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]
Zinc Oxide	REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	≤0,3	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=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.
 - [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII.
 - [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII.
 - [5] Substance of equivalent concern.
 - [6] Additional disclosure due to company policy.
- Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General:	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
Eye contact:	Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
Inhalation:	Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
Skin contact:	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
Ingestion:	Rinse mouth. If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
Protection of first aiders:	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

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

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitiser and an irritant. It contains low molecular weight epoxy constituents which are irritating to eyes, mucous membrane and skin. Repeated skin contact may lead to irritation and to sensitisation, possibly with cross-sensitisation to other epoxies. Skin contact with the mixture and exposure to spray mist and vapour should be avoided.

Based on the properties of epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitiser and a severe irritant. It contains epoxy based reactive diluents which are moderate to severely irritating to eyes, mucous membrane and skin and are strong sensitisers. Repeated skin contact may lead to irritation and to hyper-sensitivity, possibly with cross-sensitisation to other epoxies. Single oral exposure to doses of the epoxy based reactive diluents at or close to the lethal dose has been shown to cause transient neurotoxic effects in animals in some cases. However, uptake through skin and by inhalation has not caused such effects in animals.

Prolonged exposure to high concentration may cause adverse effects in target organs such as liver and kidney.
Contains bisphenol-A-epoxy resin avg.mol.wght. ≤ 700 , 1,6-bis(2,3-epoxypropoxy)hexane. May produce an allergic reaction.

Over exposure signs/symptoms:

Eye contact:	Adverse symptoms may include the following: <ul style="list-style-type: none">- pain or irritation.- watering.- redness.
Inhalation:	No specific data.
Skin contact:	Adverse symptoms may include the following: <ul style="list-style-type: none">- irritation.- redness.
Ingestion:	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to doctor:

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatment:

No specific treatment

See toxicological information (Section 11).

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Recommended: alcohol-resistant foam, CO₂, powders, water spray.

Unsuitable extinguishing media:

Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture:

In a fire or if heated, a pressure increase will occur and the container may burst.
This material is toxic 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 thermal decomposition products:

Decomposition products may include the following materials:

- carbon dioxide.
- carbon monoxide.
- sulfur oxides.
- phosphorus oxides.
- halogenated compounds.
- 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.

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

Additional information:

No unusual hazard if involved in a fire.

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. Collect spillage.

6.3 Methods and materials 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

Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see Section 8). Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws. Do not allow to enter drains or watercourses.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage:

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

Additional information on storage conditions:

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

Seveso Directive - Reporting thresholds (in tonnes).

Danger criteria:

Category	Notification & MAPP threshold	Safety report threshold
E2	200 tonne	500 tonne

7.3 Specific end use(s)

No data 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:

No exposure limit value known.

Recommended monitoring procedure:

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs:

Product/ingredient name	Type	Exposure	Value	Population	Effects
Bisphenol-A-Epoxy Resin Avg. Mol. Wght. ≤700	DNEL	Short term dermal	8,3 mg/kg bw/day	Workers	Systemic
	DNEL	Short term inhalation	12,3 mg/m ³	Workers	Systemic
	DNEL	Long term dermal	8,3 mg/kg bw/day	Workers	Systemic
	DNEL	Long term inhalation	12,3 mg/m ³	Workers	Systemic
	DNEL	Short term dermal	3,6 mg/kg bw/day	General population [Human via the environment]	Systemic
	DNEL	Short term inhalation	0,75 mg/m ³	General population [Human via the environment]	Systemic

Benzyl Alcohol	DNEL	Short term oral	0,75 mg/kg bw/day	General population [Human via the environment]	Systemic
	DNEL	Long term dermal	3,6 mg/kg bw/day	General population [Human via the environment]	Systemic
	DNEL	Long term inhalation	0,75 mg/m ³	General population [Human via the environment]	Systemic
	DNEL	Long term oral	0,75 mg/kg bw/day	General population [Human via the environment]	Systemic
	DNEL	Short term dermal	47 mg/kg bw/day	Workers	Systemic
	DNEL	Short term inhalation	450 mg/m ³	Workers	Systemic
	DNEL	Long term dermal	9,5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term inhalation	90 mg/m ³	Workers	Systemic
	DNEL	Short term dermal	28,5 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term inhalation	40,55 mg/m ³	General population [Consumers]	Systemic
	DNEL	Short term oral	25 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term dermal	5,7 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term inhalation	8,11 mg/m ³	General population [Consumers]	Systemic
	DNEL	Long term oral	5 mg/kg bw/day	General population [Consumers]	Systemic
Trizinc Bis(Orthophosphate)	DNEL	Long term Inhalation	5 mg/m ³	Workers	Systemic
	DNEL	Long term inhalation	2,5 mg/m ³	General population [Consumers]	Systemic
	DNEL	Long term dermal	83 mg/kg bw/day	Workers	Systemic
	DNEL	Long term dermal	83 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term oral	0,83 mg/kg bw/day	General population [Consumers]	Systemic

Zinc Oxide	DNEL	Long term inhalation	5 mg/m ³	Workers General population [Consumers]	Systemic
	DNEL	Long term inhalation	2,5 mg/m ³		
	DNEL	Long term dermal	83 mg/kg bw/day	Workers	Systemic
	DNEL	Long term dermal	83 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term oral	0,83 mg/ kg bw/day	General population [Consumers]	Systemic

PNECs:

Product/ingredient name	Compartment detail	Value	Method detail
Bisphenol-A-Epoxy Resin Avg.Mol.Wght. ≤ 700	Fresh water	3 µg/l	-
	Marine	0,3 µg/l	-
	Sewage treatment plant	10 mg/l	-
	Fresh water sediment	0,5 mg/kg dwt	-
	Marine water sediment	0,5 mg/kg dwt	-
	Sediment	0,05 mg/kg dwt	-
Benzyl Alcohol	Fresh water	1 mg/l	Assessment factors
	Marine	0,1 mg/l	Assessment factors
	Fresh water sediment	5,27 mg/kg	Assessment factors
	Marine water sediment	0,527 mg/kg	Assessment factors
	Soil	0,456 mg/kg	Assessment factors
	Sewage treatment plant	39 mg/l	Assessment factors
Trizinc Bis(Orthophosphate)	Fresh water	48,1 µg/l	-
	Marine	14,2 µg/l	-
	Fresh water sediment	550,2 mg/kg	-
	Marine water sediment	263,9 mg/kg	-
	Soil	249,4 mg/kg	-
	Sewage treatment plant	121,4 µg/l	-
Zinc Oxide	Fresh water	25,6 µg/l	-
	Marine	7,6 µg/l	-
	Sewage treatment plant	64,7 µg/l	-
	Fresh water sediment	146 mg/kg dwt	-
	Marine water sediment	70,3 mg/kg dwt	-
	Soil	44,3 mg/kg dwt	-

8.2 Exposure controls

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

Individual protection measures:

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/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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: safety glasses with side-shields. (EN 166)

Skin protection:

Hand protection: There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves: For prolonged or repeated handling, use the following types of gloves:
- Recommended: > 8 hours (breakthrough time): neoprene (0.65mm)
The recommendation for the type or types of glove to use when handling this product is based on information from the following source:
- EN 374.
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. Recommended: Wear overalls or long sleeved shirt. (EN 467)

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 (as filter combination A-P2). (EN141).

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 Information on basic physical and chemical properties

Appearance:

Physical state:	Liquid.
Colour:	Not available.
Odour:	Slight.
Odour threshold:	Not available.
pH:	Not available.
Melting point / freezing point:	Not available.
Initial boiling point & boiling range:	Not available
Flash point:	Closed cup: 101°C.
Evaporation rate:	Not available.
Flammability (solid, gas):	Not available.

Upper/lower flammability or exposure limits:	Not available.
Vapour pressure:	Not available.
Vapour density:	Not available.
Relative density:	2,092.
Solubility(ies):	Insoluble in the following materials: cold & hot water.
Partition co-efficient n-octanol/water:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Dynamic (room temperature): 28270 mPa's.
Explosive properties:	Not available.
Oxidising properties:	Not available.

9.2 Other information

No additional information.

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

Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions

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

10.4 Conditions to avoid

When exposed to high temperatures may produce hazardous decomposition products.

10.5 Incompatible materials

Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO₂ and smoke can be generated.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Product/ingredient name	Result	Species	Dose	Exposure
Bisphenol-A-Epoxy Resin Avg.Mol.Wght. ≤700	LD50 dermal	Rabbit	>2000 mg/kg	-
	LD50 oral	Mouse	20 g/kg	-
	LD50 oral	Rat	30 g/kg	-
Benzyl Alcohol	LC50 inhalation dusts and mists	Rat	>4,178 mg/l	4 hours
	LD50 dermal	Rabbit	2000 mg/kg	-
	LD50 oral	Rat	1230 mg/kg	-
Trizinc Bis(Orthophosphate)	LD50 oral	Rat	1620 mg/kg	-
	LC50 inhalation dusts and mists	Rat	>5,7 mg/l	4 hours
	LD50 oral	Rat	>5000 mg/kg	-
1,6-Bis(2,3-Epoxypropoxy) Hexane	LD50 oral	Rat	2900 mg/kg	-
	LD50 oral	Rat	2900 mg/kg	-
Zinc Oxide	LC50 inhalation dusts and mists	Mouse	2500 mg/m ³	4 hours
	LC50 inhalation dusts and mists	Rat	>5700 mg/m ³	4 hours
	LD50 oral	Rat	>15 g/kg	-

Conclusion/summary:

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

Acute toxicity estimates:

Not available.

Irritation/corrosion:

Product/ingredient name	Result	Species	Score	Exposure	Observation
Bisphenol-A-Epoxy Resin Avg. Mol.Wght. ≤700	Skin - Oedema	Rabbit	1	4 hours	-
	Skin - Erythema/Eschar	Rabbit	1,5	4 hours	-
	Skin - Mild irritant	Rabbit	-	4 hours	-
	Eyes - Irritant	Rabbit	-	-	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
Benzyl Alcohol	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Moderate irritant	Pig	-	100 Percent	-
Zinc Oxide	Eyes - Irritant	Rabbit	-	-	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Conclusion/summary:

Skin: Causes skin irritation.
Eyes: Causes serious eye irritation.
Respiratory: Based on available data, the classification criteria are not met.

Sensitisation:

Product/ingredient name	Route of exposure	Species	Result
Bisphenol-A-Epoxy Resin Avg. Mol.Wght. ≤700	Skin	Mouse	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:

Conclusion/summary:

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

Carcinogenicity:

Product/ingredient name	Result	Species	Dose	Exposure
Bisphenol-A-Epoxy Resin Avg. Mol.Wght. ≤700	Negative - Oral - TDLo	Rat - Female	>1000 mg/kg	2 years; 7 days per week
	Negative - Oral - TDLo	Mouse - Male	>100 mg/kg	2 years; 3 days per week
Benzyl Alcohol	Negative - Oral - TD	Rat	-	103 weeks; 5 days per week

Conclusion/summary:

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

Reproductive toxicity:

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Bisphenol-A-Epoxy Resin Avg. Mol.Wght. ≤700	-	Negative	-	Rat	Oral: 750 mg/kg	7 days per week

Conclusion/summary:

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

Teratogenicity:

Product/ingredient name	Result	Species	Dose	Exposure
Bisphenol-A-Epoxy Resin Avg. Mol.Wght. ≤700	Negative - Oral	Rat - Female	>540 mg/kg	7 days per week
	Negative - Dermal	Rabbit - Female	>300 mg/kg	7 days per week
Benzyl Alcohol	Negative - Route of exposure unreported	Mouse - Female	550 mg/kg	-

Conclusion/summary:

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

Specific target organ toxicity (single exposure):

Not available.

Specific target organ toxicity (repeated exposure):

Not available.

Aspiration hazard:

Not available.

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
Bisphenol-A-Epoxy Resin Avg. Mol.Wght. ≤700	Sub-chronic NOAEL Oral	Rat	50 mg/kg	-
	Sub-chronic LOEL Oral	Rat	250 mg/kg	-
	Sub-chronic LOEL Oral	Rat	1000 mg/kg	-
	Sub-chronic NOAEL Dermal	Rat	100 mg/kg	90 days; 5 days per week
	Sub-chronic NOEL Dermal	Rat	10 mg/kg	90 days; 5 days per week

Conclusion/summary:

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

General:	Once sensitised, 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.
Teratogenicity:	No known significant effects or critical hazards.
Development effects:	No known significant effects or critical hazards.
Fertility effects:	No known significant effects or critical hazards.
Other information:	Not available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

There are no data available on the mixture itself. Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Product/ingredient name	Result	Species	Exposure	
Bisphenol-A-Epoxy ResinAvg. Mol.Wght. ≤700	Acute EC50 2,1 mg/l	Daphnia spec.	48 hours	
	Acute LC50 1,3 mg/l	Fish	96 hours	
Benzyl Alcohol	Chronic NOEC 0,3 mg/l	Daphnia spec.	21 days	
	Acute EC50 770 mg/l	Algae	72 hours	
	Acute LC50 646 mg/l	Fish - Leuciscus idus	48 hours	
	Acute LC50 460000 µg/l Freshwater	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours	
		Algae	72 hours	
Trizinc Bis(Orthophosphate)	Acute NOEC 310 mg/l	Daphnia spec. - ceriodaphnia dubia	48 hours	
	Acute EC50 5,7 mg/l	Algae - selenastrum capricornutum	72 hours	
Zinc Oxide	Acute IC50 1,87 mg/l	Algae	72 hours	
	Acute EC50 0,024 mg/l	Algae	72 hours	
	Acute EC50 0,137 mg/l	Algae	72 hours	
	Acute EC50 0,413 mg/l	Daphnia spec.	48 hours	
	Acute EC50 0,481 mg/l Freshwater	Daphnia spec. - Daphnia magna - Neonate	48 hours	
		Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours	
	Acute LC50 98 µg/l Freshwater	Daphnia spec. - Daphnia magna - Neonate	48 hours	
	Acute LC50 0,33 to 0,78 mg/l	Fish	96 hours	
		Chronic NOEC 0,019 mg/l	Algae	7 days
		Chronic NOEC 0,037 mg/l	Daphnia spec.	21 days
Chronic NOEC 0,082 mg/l		Daphnia spec.	7 days	
Chronic NOEC 0,199 mg/l	Fish	30 days		

Conclusion:

Toxic to aquatic life with longlasting effects.

12.2 Persistence & degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Bisphenol-A-Epoxy ResinAvg. Mol.Wght. ≤700	OECD 301B	6 to 12 % - Not readily - 28 days	-	-
	OECD 301F	5 % - Not readily - 28 days	-	-
Benzyl Alcohol	OECD 301A	96 % - Readily - 21 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
Bisphenol-A-Epoxy Resin Avg. Mol.Wght. ≤700	-	-	Not readily
Benzyl Alcohol	-	-	Readily
1,6-Bis(2,3-Epoxypropoxy)	-	-	Not readily
Hexane	-	-	-

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Bisphenol-A-Epoxy Resin Avg. Mol.Wght. ≤700	2.64 to 3.78	31	Low
Benzyl Alcohol	0,87	-	Low
Trizinc Bis(Orthophosphate)	-	60960	High
1,6-Bis(2,3-Epoxypropoxy)	0,822	-	Low
Hexane	-	-	-
Zinc Oxide	-	177	Low

12.4 Mobility in soil

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

Not available.

Mobility:

Not available.

12.5 Results of PBT and vPvB assessment

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

12.6 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.

Disposal considerations:

Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

European waste catalogue (EWC):

The European Waste Catalogue classification of this product, when disposed of as waste, is:

Waste code	Waste designation
08 01 11*	Waste paint and varnish containing organic solvents or other hazardous substances









Packaging:

Method of disposal: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Disposal considerations: Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN3082	UN3082	UN3082	UN3082
14.2 UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. [trizinc bis (orthophosphate)]	Environmentally hazardous substance, liquid, n.o.s. [trizinc bis (orthophosphate)]	Environmentally hazardous substance, liquid, n.o.s. Marine pollutant [trizinc bis (orthophosphate)]	Environmentally hazardous substance, liquid, n.o.s. [trizinc bis (orthophosphate)]
14.3 Transport hazard class(es)	9  	9  	9  	9  
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes	Yes	Yes	Yes
Additional information	<p>Remarks (≤5L:) Exempted</p> <p>ADR Tunnel code: (E)</p>	-	<p>Emergency schedules (EmS) F-A + S-F</p> <p>Marine pollutant (P)</p> <p>Remarks (≤5L:) Exempted</p>	<p>Passenger and cargo aircraft Quantity limitation 450 L Packaging instructions: 964</p> <p>Cargo aircraft only Quantity limitation 450 L Packaging instructions: 964</p> <p>Limited quantities - passenger aircraft Quantity limitation: 30 kg Packaging instructions: Y 964</p>

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.

15. REGULATORY INFORMATION

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

EU Regulation (EC) No. 1907/2006 (REACH):

Annex XIV - List of substances subject to authorisation Annex XIV:

None of the components are listed.

Substances of very high concern:

None of the components are listed.

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

Not applicable.

Other EU regulations:

VOC: The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

VOC for ready use mixture: 2004/42/EC - IIA/j: 500g/l (2010). <= 300g/lVOC.

Europe inventory: All components are listed or exempted.

Ozone depleting substances (1005/2009/EU):

Not listed.

Prior Informed Consent (PIC) (649/2012/EU):

Not listed.

Seveso Directive:

This product is controlled under the Seveso Directive.

Danger criteria

Category: E2.

National regulations:

Industrial use: The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

References: EH40/2005 Workplace exposure limits.
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No.2016/918.

International regulations:

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E):

Not listed.

Stockholm Convention on Persistent Organic Pollutants:

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC):

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals:

Not listed.

CN code:

3208 90 91.

International lists:

National inventory:

Australia:	All components are listed or exempted.
Canada:	At least one component is not listed in DSL but all such components are listed in NDSL.
China:	All components are listed or exempted.
Japan:	Japan inventory (ENCS): Not determined. Japan inventory (ISHL) : Not determined.
Malaysia:	Not determined
New Zealand:	All components are listed or exempted.
Philippines:	All components are listed or exempted.
Republic of Korea:	All components are listed or exempted.
Taiwan:	Not determined.
Turkey:	Not determined.
United States:	All components are listed or exempted.
Thailand:	Not determined.
Vietnam:	Not determined

16. OTHER INFORMATION

Abbreviations & 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.
PBT:	Persistent, Bioaccumulative and Toxic.
PNEC:	Predicted No Effect Concentration.
RRN:	REACH Registration Number.
vPvB:	Very Persistent and Very Bioaccumulative.

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

Classification	Justification
Skin Irrit. 2, H315	Expert judgment
Eye Irrit. 2, H319	Expert judgment
Skin Sens. 1, H317	Expert judgment
Aquatic Chronic 2, H411	Expert judgment

Full text of H-phrases referred to in sections 2 and 3:

H302:	Harmful if swallowed.
H315:	Causes skin irritation.
H317:	May cause an allergic skinreaction.
H319:	Causes serious eyeirritation.
H332:	Harmful if inhaled.
H400:	Very toxic to aquaticlife.
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, H302:	ACUTE TOXICITY (oral) - Category 4.
Acute Tox. 4, H332:	ACUTE TOXICITY (inhalation) - Category 4.
Aquatic Acute 1, H400:	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1.
Aquatic Chronic 1, H410:	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1.
Aquatic Chronic 2, H411:	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2.
Aquatic Chronic 3, H412:	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3.
Eye Irrit. 2, H319:	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2.
Skin Irrit. 2, H315:	SKIN CORROSION/IRRITATION - Category 2.
Skin Sens. 1, H317:	SKIN SENSITISATION - Category 1.

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 METprime - Part B.

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

Main use category: Industrial uses / Primer.

1.3 Manufacturer/Supplier

Supplier:
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 Manufacturer/Supplier

Emergency telephone: 01744 648 400 - (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:

Acute Tox. 4, H332 : Skin Irrit. 2, H315 : Eye Irrit. 2, H319 : Skin Sens. 1, H317.

Ingredients of unknown toxicity:

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 Labelling according to Regulation (EU) 1272/2008

Hazard pictures:



Signal word:

Warning.

Hazard statements:

Harmful if inhaled.
Causes serious eye irritation.
Causes skin irritation.
May cause an allergic skin reaction.

Precautionary statements:

General:

Not applicable.

Prevention:

P280: Wear protective gloves and eye protection:
- neoprene gloves (0.65mm) and safety glasses with side-shields.

Response:

P305: IF IN EYES:
P351: Rinse cautiously with water for several minutes.
P338: Remove contact lenses, if present and easy to do. Continue rinsing.
P303: IF ON SKIN (or hair):
P361: Take off immediately all contaminated clothing.
P353: Rinse skin with water or shower.

P301: IFSWALLOWED:
P330: Rinse mouth.
P331: Do NOT induce vomiting

Storage: Not applicable.

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

Hazardous ingredients: Benzyl Alcohol and 3,6-Diazaoctanethylenediamin.

Supplemental label elements: 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:

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

Two-part primer for priming of prepared/weathered metals.

3.1 Mixture

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
Benzyl Alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥25 - ≤50	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	[11]
2,4,6-Tris (Dimethylaminomethyl) Phenol	REACH #: 01-2119560597-27 EC: 202-013-9 CAS: 90-72-2 Index: 603-069-00-0	≤10	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 3, H412	[11]
3,6-Diazaoctanethylenedia Min	EC: 203-950-6 CAS: 112-24-3 Index: 612-059-00-5	≤3	Acute Tox. 3, H311 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412 See Section 16 for the full text of the H statements declared above.	[11]

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.
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII.
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII.
- [5] Substance of equivalent concern.
- [6] Additional disclosure due to company policy.

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

4. FIRST AID MEASURES

4.1 Description of first aid measures

General:	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
Eye contact:	Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
Inhalation:	Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
Skin contact:	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
Ingestion:	Rinse mouth. If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
Protection of first aiders:	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

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

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains 3,6-diazaoctanethylenediamin. May produce an allergic reaction.

Over exposure signs/symptoms:

Eye contact:	Adverse symptoms may include the following: <ul style="list-style-type: none">- pain or irritation.- watering.- redness.
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 doctor:

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 treatment:

No specific treatment.

See toxicological information (Section 11).

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Recommended: alcohol-resistant foam, CO₂, powders, water spray.

Unsuitable extinguishing media:

Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture:

In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition 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.

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

Additional information:

No unusual hazard if involved in a fire.

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 spill 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 materials 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 spill 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

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

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

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Put on appropriate personal protective equipment (see Section 8).

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

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

Comply with the health and safety at work laws.

Do not allow to enter drains or watercourses.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage:

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

Additional information on storage conditions@

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

Seveso Directive - Reporting thresholds (in tonnes).

7.3 Specific end use(s)

No data 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:

No exposure limit value known.

Recommended monitoring procedure:

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs:

Product/ingredient name	Type	Exposure	Value	Population	Effects
Benzyl Alcohol	DNEL	Short term dermal	47 mg/kg bw/day	Workers	Systemic
	DNEL	Short term inhalation	450 mg/m ³	Workers	Systemic
	DNEL	Long term dermal	9,5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term inhalation	90 mg/m ³	Workers	Systemic
	DNEL	Short term dermal	28,5 mg/ kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term inhalation	40,55 mg/ m ³	General population [Consumers]	Systemic
	DNEL	Short term oral	25 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term dermal	5,7 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term inhalation	8,11 mg/m ³	General population [Consumers]	Systemic
	DNEL	Long term oral	5 mg/kg bw/day	General population [Consumers]	Systemic
2,4,6-Tris(Dimethylaminomethyl) Phenol	DNEL	Long term inhalation	0,31 mg/m ³	Workers	Systemic

PNECs:

Product/ingredient name	Compartment detail	Value	Method detail
Benzyl Alcohol	Fresh water	1 mg/l	Assessment factors
	Marine	0,1 mg/l	Assessment factors
	Fresh water sediment	5,27 mg/kg	Assessment factors
	Marine water sediment	0,527 mg/kg	Assessment factors

2,4,6-Tris(Dimethylaminomethyl)Phenol	Soil	0,456 mg/kg	Assessment factors
	Sewage treatment plant	39 mg/l	Assessment factors
	Fresh water	0,84 mg/l	-

8.2 Exposure controls

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

Individual protection measures:

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/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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: safety glasses with side-shields. (EN 166)

Skin protection:

Hand protection: There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves: For prolonged or repeated handling, use the following types of gloves:
- Recommended: 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. Wear suitable gloves. > 8 hours (breakthrough time): neoprene (0.65mm)
The recommendation for the type or types of glove to use when handling this product is based on information from the following source:
- EN 374.
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. Recommended: Wear overalls or long sleeved shirt. (EN 467)

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 P3 (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 Information on basic physical and chemical properties

Appearance:

Physical state:	Liquid.
Colour:	Not available.
Odour:	Not available.
Odour threshold:	Not available.
pH:	Not available.
Melting point / freezing point:	Not available.
Initial boiling point & boiling range:	Not available.
Flash point:	Closed cup: 107°C.
Evaporation rate:	Not available.
Flammability (solid, gas):	Not available.
Upper/lower flammability or exposure limits:	Not available.
Vapour pressure:	Not available.
Vapour density:	Not available.
Relative density:	1,027.
Solubility(ies):	Not available.
Partition co-efficient n-octanol/water:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Dynamic (room temperature): 6000 mPa's.
Explosive properties:	Not available.
Oxidising properties:	Not available.

9.2 Other information

No additional information.

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

Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions

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

10.4 Conditions to avoid

When exposed to high temperatures may produce hazardous decomposition products.

10.5 Incompatible materials

Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO₂ and smoke can be generated.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Product/ingredient name	Result	Species	Dose	Exposure
Benzyl Alcohol	LC50 inhalation dusts and mists	Rat	>4,178 mg/l	4 hours
	LD50 dermal	Rabbit	2000 mg/kg	-
	LD50 oral	Rat	1230 mg/kg	-
2,4,6-Tris (Dimethylaminomethyl)	LD50 oral	Rat	1620 mg/kg	-
	LD50 dermal	Rabbit	1242 mg/kg	-
Phenol	LD50 oral	Rat	2169 mg/kg	-
	LD50 dermal	Rabbit	805 mg/kg	-
3,6-Diazaoctanethylenediamin	LD50 dermal	Rabbit	805 mg/kg	-
	LD50 oral	Rat	2500 mg/kg	-

Conclusion/summary:

Harmful if inhaled.

Acute toxicity estimates:

Route	ATE value
Inhalation (dusts and mists)	1,5 mg/l

Irritation/corrosion:

Product/ingredient name	Result	Species	Score	Exposure	Observation
Benzyl Alcohol	Skin - Moderate irritant	Pig	-	100 Percent	-
	Eyes - Irritant	Rabbit	-	-	-
	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
2,4,6-Tris (Dimethylaminomethyl)	Skin - Mild irritant	Rat	-	0.025 Milliliters	-
	Skin - Severe irritant	Rat	-	0.25 Milliliters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
3,6-Diazaoctanethylenediamin	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	49 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Severe irritant	Rabbit	-	490 milligrams	-
	Skin - Severe irritant	Rabbit	-	490 milligrams	-

Conclusion/summary:

Skin: Causes skin irritation.
Eyes: Causes serious eye irritation.
Respiratory: Based on available data, the classification criteria are not met.

Sensitisation:

Product/ingredient name	Route of exposure	Species	Result
2,4,6-Tris (Dimethylaminomethyl) Phenol	Skin	Guinea pig	Not sensitising

Conclusion/summary:

Skin: May cause an allergic skin reaction.
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:

Product/ingredient name	Result	Species	Dose	Exposure
Benzyl Alcohol	Negative - Oral - TD	Rat	-	103 weeks; 5 days per week

Conclusion/summary:

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

Reproductive toxicity:

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
2,4,6-Tris (Dimethylaminomethyl) Phenol	-	-	Negative	Rat	Oral	28 days

Conclusion/Summary:

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

Teratogenicity:

Product/ingredient name	Result	Species	Dose	Exposure
Benzyl Alcohol	Negative - Route of exposure unreported	Mouse - Female	550 mg/kg	-

Conclusion/summary:

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

Specific target organ toxicity (single exposure):

Not available.

Specific target organ toxicity (repeated exposure):

Not available.

Aspiration hazard:

Not available.

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 sensitised, 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.
Teratogenicity:	No known significant effects or critical hazards.
Development effects:	No known significant effects or critical hazards.
Fertility effects:	No known significant effects or critical hazards.
Other information:	Not available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

There are no data available on the mixture itself. Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Product/ingredient name	Result	Species	Exposure
Benzyl Alcohol	Acute EC50 770 mg/l	Algae	72 hours
	Acute LC50 646 mg/l	Fish - Leuciscus idus	48 hours
	Acute LC50 460000 µg/l Freshwater	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
2,4,6-Tris (Dimethylaminomethyl) Phenol	Acute NOEC 310 mg/l	Algae	72 hours
	Acute EC50 84 mg/l	Algae	72 hours
3,6-Diazaoctanethylenediamin	Acute LC50 175 mg/l	Fish - Cyprinus carpio	96 hours
	Acute LC50 180 to 240 mg/l	Fish	96 hours
3,6-Diazaoctanethylenediamin	Acute EC50 3700 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 33900 µg/l Fresh water	Daphnia spec. - Daphnia magna	48 hours

Conclusion:

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

12.2 Persistence & degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Benzyl Alcohol	OECD 301A	96 % - Readily - 21 days	-	-
	OECD 301D	4 % - Not readily - 28 days	-	-
2,4,6-Tris (Dimethylaminomethyl) Phenol				

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
Benzyl Alcohol	-	-	Readily
2,4,6-Tris (Dimethylaminomethyl) Phenol	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Benzyl Alcohol	0,87	-	low
2,4,6-Tris (Dimethylaminomethyl)	0,219	-	low
Phenol			
3,6-Diazaoctanethylenediamin	-1.66 to -1.4	-	low

12.4 Mobility in soil

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

Not available.

Mobility:

Not available.

12.5 Results of PBT and vPvB assessment

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

12.6 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.

Disposal considerations:

Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

European waste catalogue (EWC):

The European Waste Catalogue classification of this product, when disposed of as waste, is:

Waste code	Waste designation
08 01 11*	Waste paint and varnish containing organic solvents or other hazardous substances

Packaging:

Method of disposal:

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Disposal considerations:

Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

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. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated	Not regulated	Not regulated	Not regulated
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No	No	No	No
Additional information	-	-	-	-

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.

15. REGULATORY INFORMATION

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

EU Regulation (EC) No. 1907/2006 (REACH):

Annex XIV - List of substances subject to authorisation Annex XIV:

None of the components are listed.

Substances of very high concern:

None of the components are listed.

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

Not applicable.

Other EU regulations:

VOC: The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

VOC for ready use mixture: 2004/42/EC - IIA/j: 500g/l (2010). <= 300g/lVOC.

Europe inventory: All components are listed or exempted.

Ozone depleting substances (1005/2009/EU):

Not listed.

Prior Informed Consent (PIC) (649/2012/EU):

Not listed.

Seveso Directive:

This product is controlled under the Seveso Directive.

National regulations:

Industrial use: The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

References: EH40/2005 Workplace exposure limits.
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No.2016/918.

International regulations:

Chemical Weapon Convention List Schedules I, II & III Chemicals:

Not listed.

Montreal Protocol (Annexes A, B, C, E):

Not listed.

Stockholm Convention on Persistent Organic Pollutants:

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC):

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals:

Not listed.

CN code:

3208 90 91.

International lists:

National inventory:

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

16. OTHER INFORMATION

Abbreviations & 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.
PBT:	Persistent, Bioaccumulative and Toxic.
PNEC:	Predicted No Effect Concentration.
RRN:	REACH Registration Number.
vPvB:	Very Persistent and Very Bioaccumulative.

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

Classification	Justification
Acute Tox. 4, H332	Expert judgment
Skin Irrit. 2, H315	Expert judgment
Eye Irrit. 2, H319	Expert judgment
Skin Sens. 1, H317	Expert judgment

Full text of H-phrases referred to in sections 2 and 3:

H302:	Harmful if swallowed.
H311:	Toxic in contact with skin.
H312:	Harmful in contact with skin.
H314:	Causes severe skin burns and eye damage.
H315:	Causes skin irritation.
H317:	May cause an allergic skinreaction.
H318:	Causes serious eye irritation.
H319:	Causes serious eyeirritation.
H332:	Harmful if inhaled.
H412:	Harmful to aquatic life with long lasting effects.

Full text of classifications (CLP/GHS):

Acute Tox. 3, H311:	ACUTE TOXICITY (dermal) - Category 3.
Acute Tox. 4, H302:	ACUTE TOXICITY (oral) - Category 4.
Acute Tox. 4, H312:	ACUTE TOXICITY (dermal) - Category 4.
Acute Tox. 4, H332:	ACUTE TOXICITY (inhalation) - Category 4.
Aquatic Chronic 3, H412:	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3.
Eye Dam. 1, H318:	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1.
Eye Irrit. 2, H319:	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2.
Skin Corr. 1B, H314:	SKIN CORROSION/IRRITATION - Category 1B.
Skin Irrit. 2, H315:	SKIN CORROSION/IRRITATION - Category 2.
Skin Sens. 1, H317:	SKIN SENSITISATION - Category 1.

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