

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

1.1 Product identifier

Trade name/designation: Caltech Alpha.

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

Relevant identified uses: Liquid Roof Coating.

Recommended restrictions: Reserved for industrial and professional use.

1.3 Supplier details

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

1.4 Emergency telephone number

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

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Skin Sens. 1: H317; Aquatic Chronic 3: H412. EUH 211.

2.2 Label elements

Hazard pictures:



Signal word:

Warning.

Hazard statements:

H317: May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements prevention:

P261 Avoid breathing vapours.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: get medical advice/attention.

Precautionary statements disposal:

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

Supplementary Label Information (EU):

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

Additional Labelling:

411-700-4: 1,6-Hexadiyl-Bis[2-[2-(1-Ethylpentyl)-3-Oxazolidinyl]-Ethyl]-Carbamate.
500-125-5: Isophorone Diisocyanate Homopolymer.
206-354-4: Diuron.

2.3 Other hazards

This product is not identified as a PBT or vPvB substance.

3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

3.1 Substances

See 'Composition on ingredients' in Section 3.2.

3.2 Mixtures

Other data:

This mixture contains $\geq 1\%$ titanium dioxide (CAS 13463-67-7) The Annex VI classification of Titanium dioxide does not apply to this mixture according to its Note 10.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Ingredient	Conc %	CAS No	EC No	Reach Reg No	CLP Classification
1,6-Hexadiyl-Bis[2-[2-(1-Ethylpentyl)-3-Oxazolidinyl]-Ethyl]-Carbamate	1-5	140921-24-0	411-700-4		Skin Sens. 1: H317
Titanium Dioxide	1 - 5	13463-67-7	236-675-5	01-2119489379-17-0237	Carc. 2: H351*
Isophorone Diisocyanate Homopolymer	0.5 - 2.0	53880-05-0	500-125-5		Skin Sens. 1: H317; STOT SE 3 H335
Reaction Mass Of Poly(Oxy-1,2-Ethanediy), .Alpha.-[3-[3-(2H-Benzotriazol-2-Yl)-5-(1,1-Dimethylethyl)-4-Hydroxyphenyl]-1-Oxopropyl]-.Omega.-Hydroxy- And Poly(Oxy-1,2-Ethanediy), .Alpha.-[3-[3-(2H-Benzotriazol-2-Yl)-5-(1,1-Dimethylethyl)-4-Hydroxyphenyl]-1-Oxopropyl]-.Omega.-[3-[3-(2H-Benzotriazol-2-Yl)-5-(1,1-Dimethylethyl)-4-Hydroxyphenyl]-1-Oxopropoxy]-	>0.1 - <1.0	104810-48-2	400-830-7	01-0000015075-76-0017	Skin Sens. 1A: H317; Aquatic Chronic 2; H411
Diuron (ISO)	>0.1 - <0.24	330-54-1	206-354-4		Acute Tox. 4: H302; STOT RE 2: H373; Carc. 2 H351; Acute 1: H400; Aquatic Chronic 1: H410
Diocetylfin Dilaurate	>0.1 - <0.25	3648-18-8	222-883-3	01-2119979527-19-0000	STOT RE 1: H372; Repr. 1B: H360D

*Note: The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter $\leq 10 \mu\text{m}$. This classification does not apply to liquid mixtures.

General advice:	If possible, remove affected person from source of contamination. Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after the accident.
Eye contact:	Check/remove any contact lenses from the eyes before rinsing. Wash eyes with plenty of water for at least 15 minutes and get medical attention if symptoms persist.
Skin contact:	Remove contaminated clothing unless stuck to skin and wash skin with copious amounts of soap and water. Get medical attention if discomfort continues.
Inhalation:	Provide fresh air in a comfortable upright sitting position. Get medical attention if any discomfort continues. If breathing is difficult oxygen may be administered by properly trained personnel. Perform artificial respiration if breathing has stopped.
Ingestion:	Do not induce vomiting. Loosen tight clothing, rinse mouth and provide fresh air. Seek medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

Not expected to present a significant hazard under anticipated conditions of normal use.

4.3 Indication of any immediate medical attention and special treatment needed.

Not expected to present a significant hazard under anticipated conditions of normal use.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

CO₂, foam, dry powder. Use extinguishing media for the appropriate situation.

Extinguishing media which must not be used for safety reasons:

Water, High volume water jet.

5.2 Special hazards arising from the substance or mixture

Due to excessive heat/pressure build up closed containers can burst when heated. May ignite at high temperature. When heated to decomposition, may release vapours/gases that may be hazardous: Carbon Dioxide, Carbon Monoxide, Nitrous Oxides and Phosphorus Oxides.

5.3 Advice for fire-fighters

Remove containers away from fire and water cool.
Use appropriate protective clothing and an approved respirator during firefighting.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

When cleaning a spillage outside normal working area, wear suitable protective clothing such as nitrile gloves and suitable goggles. Avoid contact with skin and eyes. Provide adequate ventilation. In an unventilated or tightly confined space respiratory protection must be used if the general level exceeds the Recommended Workplace Exposure Limit. (W.E.L.).

6.2 Environmental Precautions

Do not allow product to enter drains.
In case of any contamination of watercourses, contact relevant authorities.

6.3 Methods and material for containment and cleaning up

In the first instance make efforts to contain the spilled material. Collect spillage using an inert absorbent material, place in containers suitable for disposal, seal securely and deliver for disposal in accordance with local regulations.

6.4 Reference to other sections

Personal protection covered in in Section 8.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Always observe good industrial hygiene practices. Avoid contact with skin, eyes and clothing. Avoid breathing vapours and spray mists Under normal working conditions, respiratory protection should not be necessary. However, in confined spaces without adequate ventilation, a suitable filter mask may be required.
When using, do not consume food, drink or smoke.
Remove contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities

Store in the tightly closed original container in a dry place. Protect from frost and direct sunlight. Store at temperature between 5 - 25°C.

7.3 Specific end use(s)

No specific data available.

Recommended storage temperature:

Keep in a dry, cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Workplace Exposure Limits (WEL) GB EH40:		
Ingredient	Time Weighted Average (TWA) 8 hours	Short Term Exposure Limit (STEL) 15 mins
Isophorone Diisocyanate	0.02mg/m ³	0.07mg/m ³

Derived No Effect Level (DNEL) Workers:

For Isophorone diisocyanate:				
Route of exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Inhalation	0.58mg/m ³	N/A	0.29mg/m ³	N/A
Dermal	Not applicable			
Oral	Not applicable			

For Titanium Dioxide:				
Route of exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required			
Inhalation	289 mg/m ³	289 mg/m ³	N/A	77 mg/m ³
Dermal	Not applicable			180 mg/kg

For EC 500-125-5:				
Route of exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required			
Inhalation	Not applicable			0.35mg/m ³
Dermal	Not applicable			0.5mg/kg

Predicted No Effect Concentration (PNEC):

For Titanium Dioxide:	
Fresh water	0.127 mg/L
Marine water	1 mg/L
Intermittent releases	0.61 mg/L
Sewage treatment plant (STP)	100 mg/L
Fresh water sediment	1000 mg/kg dry weight (d.w.)
Marine sediment	100 mg/kg dry weight (d.w.)
Soil	100 mg/kg
Oral (secondary poisoning)	1667 mg/kg food


For Isophorone Diisocyanate:	
Fresh water	0.0015mg/l
Marine water	0.00015mg/l
Intermittent releases	0.327mg/l
Sewage treatment plant (STP)	100mg/l
Fresh water sediment	N/A
Marine sediment	N/A
Soil	N/A

For EC 500-125-5:	
Fresh water	0.0023mg/L
Marine water	0.00023mg/L
Intermittent releases	0.028mg/L
Sewage treatment plant (STP)	10mg/L
Fresh water sediment	3.06 mg/kg dry weight (d.w.)

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

Marine sediment	0.306 mg/kg dry weight (d.w.)
Soil	2 mg/kg

8.2 Exposure controls

8.2.1. Appropriate engineering Controls:	In enclosed areas use local exhaust ventilation, or similar engineering controls to ensure vapours remain below occupational exposure limits.
8.2.2. Personal protection:	
Eye and face protection:	Wear safety glasses with side-shields. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Skin protection:	Wear suitable protective equipment. Long sleeved clothing.
Hands/feet protection:	Wear protective gloves made of the following material: Nitrile rubber. Polyvinyl alcohol (PVA). Viton rubber (fluoro rubber). To protect hands from chemicals, gloves should comply with European Standard EN374. The glove material must be impermeable and resistant to the product. Test the durability of the gloves before use. Protective gloves should be replaced at first signs of wear.
Body protection:	Protective clothing to include safety shoes, long-sleeved working clothing, long trousers
Respiratory protection:	Under normal working conditions, respiratory protection should not be necessary. However, in confined spaces, where there is a risk of pollution above the WEL limit, a suitable filter mask may be required.
General protective and hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Avoid contact with the skin and the eyes.
Environmental exposure controls:	Avoid release to the environment. Do not allow product to enter drains. In case of any contamination of watercourses, contact relevant authorities. See also measures detailed in Sections 6 and 7.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important health, safety and environmental information

APPEARANCE	Pigmented thixotropic liquid
ODOUR	Mild solvent
ODOUR THRESHOLD	No data available
pH	Not applicable
MELTING POINT/FREEZING POINT	Not applicable
BOILING POINT/RANGE	>130 (°C)
FLASH POINT	66 (°C) (closed cup)
EVAPORATION RATE	Not applicable
FLAMMABILITY	Not classified as flammable.
UPPER EXPLOSION LIMIT	10.8% (V)
LOWER EXPLOSION LIMIT	1% (V)
VAPOUR DENSITY (AIR = 1)	>1
RELATIVE DENSITY	~1.48
SOLUBILITY IN H ₂ O	Insoluble and immiscible
PARTITION CO-EFFICIENT	Not applicable
AUTO-IGNITION TEMPERATURE	>430 (°C)
DECOMPOSITION TEMPERATURE	Not applicable
VISCOSITY at 20°C	>5000mPas
EXPLOSIVE PROPERTIES	Not classified based on current information
OXIDISING PROPERTIES	Not classified based on current information

9.2 Other information

No other relevant data,

10. STABILITY AND REACTIVITY

10.1 Reactivity

No hazardous reactions under normal conditions of use.

10.2 Chemical stability

This product is extremely stable under normal temperature conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions under normal conditions of use.

10.4 Conditions to avoid

Avoid extreme excessive heat for prolonged periods of time. Avoid contact with water, as the product will naturally harden into a hard mass in contact with water and moisture.

10.5 Materials to avoid

Alcohols, strong acids, strong oxidising materials.

10.6 Hazardous decomposition products

No dangerous decomposition products when stored and handled correctly.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:	Not classified based on available information.
Skin corrosion/Irritation:	Not classified based on available information.
Serious eye damage/irritation:	Not classified based on available information.
Respiratory sensitisation:	Not classified based on available information.
Skin sensitisation:	May cause allergic skin reaction.
Germ cell mutagenicity:	Not classified based on available information.
Carcinogenicity:	Not classified based on available information.
Reproductive toxicity:	Not classified based on available information.
STOT-single exposure:	Not classified based on available information.
STOT-repeated exposure:	Not classified based on available information.
Aspiration hazard:	Not classified based on available information.

12. ECOLOGICAL INFORMATION

12.1 Ecological information

For EC 500-125-5:

Test	Result	Species	Exposure
OECD 203 Fish, Acute Toxicity Test	Acute LC50 2.8 mg/L Fresh water	Fish - Oncorhynchus mykiss	96 hours
OECD 202 Daphnia sp. Acute Immobilization Test	Acute EC50 >100 mg/L Fresh water	Daphnia - Daphnia magna	48 hours
OECD 201 Alga, Growth Inhibition Test	Acute EC50 10 mg/L Fresh water	Algae - Scenedesmus subspicatus	72 hours
OECD 209 Activated Sludge, Respiration Inhibition Test	Acute EC50 >1000 mg/L	Bacteria - Activated sludge	3 hours
OECD 202, part 2 Daphnia Magna Reproduction	Chronic NOEC 0.78 mg/L Fresh water	Daphnia - Daphnia magna	21 days

For Diuron (ISO):

Test	Result	Species	Exposure
OECD 203 Fish, Acute Toxicity Test	Acute LC50 14,7 mg/l Fresh water	Fish – Oncorhynchus mykiss	96 hours
OECD 202 Daphnia sp. Acute Immobilization Test	Acute EC50 1,4 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
OECD 201 Alga, Growth Inhibition Test	Acute EC50 0,022 mg/l Fresh water	Algae – Scenedesmus subspicatus	72 hours
OECD 209 Activated Sludge, Respiration Inhibition Test	Acute EC50 3080 mg/l	Bacteria – Activated sludge	0.5 hours
OECD 204 Fish, Prolonged Toxicity Test: 14-Day Study	Chronic NOEC 0,41 mg/l Fresh water	Fish – Oncorhynchus mykiss	28 days
OECD 211 Daphnia Magna Reproduction	Chronic NOEC 0,56 mg/l Fresh water	Daphnia - Daphnia magna	21 days
OECD 201 Alga, Growth Inhibition Test, Growth	Chronic NOEC 0,0032 mg/l Fresh water	Algae - Scenedesmus subspicatus	71 hours

M-factor 10.

12.2 Persistence and degradability

Product is not readily biodegradable.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This mixture contains no PBT or vPvB components at levels of 0.1% or higher.

12.6 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / packaging disposal:	All material residues and packaging must be disposed of in accordance with local/national waste disposal regulations and environmental controls.
Waste code:	Cured product is considered inert. Packaging containing liquid product will meet the criteria for hazardous waste. Code: 15 01 10*: packaging containing residues of or contaminated by hazardous substances

14. TRANSPORT INFORMATION

This product is not classified as hazardous for transport according to current regulations.

15. REGULATORY INFORMATION

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

Prohibition/Restriction:

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII):	Not applicable.
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59):	Diocetyl tin Dilaurate.
REACH - List of substances subject to authorisation (Annex XIV):	Not applicable.
REACH Information:	All substances contained in this product are preregistered or registered by our upstream suppliers and/or excluded from the regulation and/or exempted from the registration.
VOC: <240g/litre	

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

H302: Harmful if swallowed
H317: May cause an allergic skin reaction
H335: May cause respiratory irritation
H351: Suspected of causing cancer
H360D: May damage the unborn child
H372: Causes damage to organs through prolonged or repeated exposure
H373: May cause damage to organs through prolonged or repeated exposure
H400: Very toxic to aquatic life
H410: Harmful to aquatic life with long lasting effects
H412: Harmful to aquatic life with long lasting effects
EUH211: Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist

Sectors of use:

Relevant identified uses of the mixture:
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU19 Building and construction work
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against:

SU21 Consumer uses: Private households / general public / consumers.

Full text of other abbreviations:

Asp. Tox	Aspiration toxicity
Skin Irrit	Skin irritation
Skin Sens	Skin sensitisation
STOT RE	Specific target organ toxicity – repeated exposure
CAS	Chemical Abstracts Service
DNEL	Derived no-effect level
GHS	Globally Harmonized System
LC50	Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period)
LD50	Median lethal dose (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)
PBT	Persistent, bioaccumulative and toxic
PNEC	Predicted no effect concentration
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency
SVHC	Substances of Very High Concern
VOC	Volatile Organic Compounds
vPvB	Very persistent and very bioaccumulative
WEL	Workplace Exposure Limit

Training:

This material should only be used by trained personnel.
All the information supplied on this data sheet applies only when the product is used for the prescribed application and in accordance with the directions for use.
Please make this data available to all persons involved with the production, transportation and use of this product.

SDS version summary:

Version	Date of Update	Section Updated
1.1	13/06/2023	Template Change

Other information:

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

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

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