

1. Identification of the substrate/preparation and of the company/undertaking

1.1. Product identifier

Trade name/designation : CALTECH UV

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

Main use category : Industrial uses
Use of the substance/mixture : Polyurethane coating

1.3. Manufacturer/Supplier

Supplier:
Alumasc Exterior Building Products Ltd
White House Works, Bold Road, Sutton, St Helens, Merseyside, WA9 4JG. United Kingdom
Tel: +44 (0)1744 648400 E-mail: roofing@alumasc-exteriors.co.uk

1.4. Emergency telephone number

Emergency telephone : Alumasc 01744 648 400
(Mon-Thur - 08.30-17.00 Fri - 08.30-16.00)

2. Hazards identification

2.1 Classification of the substance or mixture

Product definition: Mixture

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

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Chronic aquatic toxicity, Category 3	H412: Harmful to aquatic life with long lasting effects.

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 pictograms



Signal word

: Warning

Hazard statements

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

Precautionary statements
Prevention

: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response

: P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370 + P378 In case of fire: Use dry sand, dry chemical

Hazardous components which must be listed on the label:

223-861-6	Pentamethyl piperidylsebacate
264-843-8	3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate
	4,5-dichloro-2-octyl-2H-isothiazol-3-one

Additional Labelling:

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. Composition and information about the components

3.1. Substance

Mixture

3.2. Mixture

Chemical name CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Pentamethyl piperidylsebacate 915-687-0 01-2119491304-40-XXXX Contains: bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Skin Sens.1A; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,25 - < 1
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate 4098-71-9 223-861-6 01-2119490408-31-XXXX	Acute Tox.1; H330 Skin Irrit.2; H315 Eye Irrit.2; H319 Resp. Sens.1; H334 Skin Sens.1; H317 STOT SE3; H335 Aquatic Chronic2; H411	>= 0,25 - < 0,5
2-ethylhexanoic acid, zirconium salt 22464-99-9 245-018-1 01-2119979088-21-XXXX	Repr.2; H361d	< 0,3
4,5-dichloro-2-octyl-2H-isothiazol-3-one 64359-81-5 264-843-8	Acute Tox.4; H302 Acute Tox.2; H330 Skin Corr.1B; H314 Skin Sens.1A; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,025 - < 0,25
Substances with a workplace exposure limit :		
2-methoxy-1-methylethyl acetate 108-65-6 203-603-9 01-2119475791-29-XXXX Contains: 2-methoxypropyl acetate <= 1 %	Flam. Liq.3; H226	>= 20 - < 25

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 or vPvBs 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

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

4. First-aid measures

4.1 Description of first aid measures

General	:	Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.
Eye contact	:	Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
Inhalation	:	Move to fresh air. Consult a physician after significant exposure.
Skin contact	:	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. If symptoms persist, call a physician.
Ingestion	:	Do not induce vomiting without medical advice. Rinse mouth with water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	Allergic reactions
Risks	:	Sensitising effects May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically.
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5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam, Carbon dioxide (CO₂), Dry chemical

Unsuitable extinguishing media : Water, High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread fire

Hazardous combustion products : No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

Additional information : Use water spray to cool unopened containers.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Remove all sources of ignition.
Deny access to unprotected persons.

Beware of vapours accumulating to form explosive concentrations.
Vapours can accumulate in low areas.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

For personal protection see section 8.

7. Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : Do not breathe vapours or spray mist. Avoid exceeding the given occupational exposure limits (see section 8). Do not get in eyes, on skin, or on clothing. For personal protection see section 8. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharge. Open drum carefully as content may be under pressure. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Follow standard hygiene measures when handling chemical products
- Advice on protection against fire and explosion : Use explosion-proof equipment. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Take precautionary measures against electrostatic discharges.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with local regulations.

7.3 Specific end use(s)

Specific use(s) : No data available

8. Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters *	Basis *
2-methoxy-1-methylethyl acetate	108-65-6	TWA	50 ppm 274 mg/m ³	GB EH40
		STEL	100 ppm 548 mg/m ³	GB EH40

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	urinary diamine: 1µmol/mol creatinine (Urine)	Post task	GB EH40 BAT

8.2 Exposure controls

Personal protective equipment

- Eye protection : Safety glasses with side-shields conforming to EN166
Eye wash bottle with pure water
- Hand protection : Chemical-resistant, impervious gloves complying with an approved standard must be worn at all times when handling chemical products. Reference number EN 374. Follow manufacturer specifications.
Suitable for short time use or protection against splashes:
Butyl rubber/nitrile rubber gloves (0,4 mm),
Contaminated gloves should be removed.
Suitable for permanent exposure:
Viton gloves (0.4 mm),
breakthrough time >30 min.
- Skin and body protection : Protective clothing (e.g. Safety shoes acc. to EN ISO 20345, long-sleeved working clothing, long trousers). Rubber aprons and protective boots are additionally recommended for mixing and stirring work.
- Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working

limits of the selected respirator.
organic vapor (Type A) and particulate filter
A1: < 1000 ppm; A2: < 5000 ppm; A3: < 10000 ppm
P1: Inert material; P2, P3: hazardous substances
Ensure adequate ventilation. This can be achieved by local exhaust extraction or by general ventilation. (EN 689 - Methods for determining inhalation exposure). This applies in particular to the mixing / stirring area. In case this is not sufficient to keep the concentrations under the occupational exposure limits then respiration protection measures must be used.

Environmental exposure controls

General advice : Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	various
Odour	:	hydrocarbon-like
Odour Threshold	:	No data available
Flash point	:	52 °C
Autoignition temperature	:	333 °C
Decomposition temperature	:	No data available
Lower explosion limit (Vol-%)	:	1,5 %(V)
Upper explosion limit (Vol-%)	:	10,8 %(V)
Flammability	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
pH	:	No data available
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Vapour pressure	:	3,1 hPa
Density	:	1,31 g/cm ³
Water solubility	:	insoluble
Partition coefficient: noctanol /water	:	No data available
Viscosity, dynamic	:	1.800 mPa.s
Viscosity, kinematic	:	>7 mm ² /s
Relative vapour density	:	No data available
Evaporation rate	:	No data available

9.2 Other information

No additional information.

10. Stability and reactivity

10.1 Reactivity:

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability:

The product is chemically stable.

10.3 Possibility of hazardous reactions:

Hazardous reactions : Stable under recommended storage conditions.
Vapours may form explosive mixture with air.

10.4 Conditions to avoid:

Conditions to avoid : Heat, flames and sparks.

10.5 Incompatible materials:

Materials to avoid : No data available

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

Not classified based on available information.

Components:

Pentamethyl piperidylsebacate:

Acute oral toxicity : LD50 Oral (Rat): 3.230 mg/kg

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:

Acute oral toxicity : LD50 Oral (Rat): 4.814 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0,031 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rat): > 7.000 mg/kg

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Acute oral toxicity : LD50 Oral (Rat): 1.636 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0,26 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

2-methoxy-1-methylethyl acetate:

Acute oral toxicity : LD50 Oral (Rat): > 5.000 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5.000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitisation

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

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 toxicity

Not classified based on available information.

12. Ecological information

12.1 Toxicity

Components:

Pentamethyl piperidylsebacate :

Toxicity to fish : LC50: 0,97 mg/l, 96 h, Fish

4,5-dichloro-2-octyl-2H-isothiazol-3-one :

Toxicity to fish : LC50: 0,0027 mg/l, 96 h, Fish

M-Factor (Acute aquatic toxicity) : 100

M-Factor (Chronic aquatic toxicity) : 10

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Additional ecological Information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.




13. Disposal considerations

13.1 Waste treatment methods

Product : The generation of waste should be avoided or minimized wherever Possible.
Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.
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.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Contaminated packaging : 15 01 10* packaging containing residues of or contaminated by dangerous substances

14. Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263
14.2 UN proper shipping name	Paint related material	Paint related material	Paint related material
14.3 Transport hazard class(es)	3. 	3. 	3. 
14.4 Packing group	III	III	III
14.5 Environmental hazards	No.	No.	No.
Additional information	ADR Tunnel code: (D/E)	Emergency schedules (EmS): F-E + S-E Marine pollutant (P) NO	

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

Prohibition/Restriction

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Banned and/or restricted (2-methoxypropyl acetate)

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : None of the components are listed (= > 0.1 %).

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

REACH Information : All substances contained in our Products are
- preregistered or registered by our upstream suppliers, and/or
- preregistered or registered by us, and/or
- excluded from the regulation, and/or
- exempted from the registration.

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

P5c	FLAMMABLE LIQUIDS	Quantity 1	Quantity 2
VOC-CH (VOCV)	: 24,55 %	5.000 t	50.000 t
VOC-EU (solvent)	: 24,55 %		

If other regulatory information applies that is not already provided elsewhere in the Safety Data Sheet, then it is described in this subsection.

Health, safety and environmental regulation/legislation specific for the substance or mixture: : The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002
Control of Substances Hazardous to Health Regulations 2002
The Management of Health and Safety at Work Regulations 1999
Health and Safety at Work Act 1974
Environmental Protection Act 1990 & Subsidiary Regulations

Other regulations : Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

15.2 Chemical safety assessment

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

16. Other information

Full text of H-Statements

H226	:	Flammable liquid and vapour.
H302	:	Harmful if swallowed.
H314	:	Causes severe skin burns and eye damage.
H315	:	Causes skin irritation.
H317	:	Causes serious eye irritation.
H330	:	Fatal if inhaled.
H334	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	:	May cause respiratory irritation.
H361d	:	Suspected of damaging the unborn child.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
Repr.	Reproductive toxicity
Resp. Sens.	Respiratory sensitisation
Skin Corr.	Skin corrosion
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation
STOT SE	Specific target organ toxicity - single exposure
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
CAS	Chemical Abstracts Service
DNEL	Derived no-effect level
EC50	Half maximal effective concentration
GHS	Globally Harmonized System
IATA	International Air Transport Association
IMDG	International Maritime Code for Dangerous Goods
LD50	Median lethal dosis (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)
LC50	Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period)
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
OEL	Occupational Exposure Limit
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,

SVHC
vPvB

Authorisation and Restriction of Chemicals (REACH), establishing a
European Chemicals Agency
Substances of Very High Concern
Very persistent and very bioaccumulative

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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