

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

1.1 Product identifier

Trade name/designation: Caltech FCP Finish

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

Relevant identified uses: Raw Material for Production of polyester roof waterproofing systems.

Recommended restrictions: SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen).
SU3 Industrial uses: Uses of substances as such or in preparations* at industrial sites.

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

Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 [1]:

H225 - Flammable Liquids Category 2, H335 - Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, H315 - Skin Corrosion/Irritation Category 2, H317 - Sensitisation (Skin) Category 1.

2.2 Label elements

Hazard pictures:



Signal word:

Danger.

Hazard statements:

H225: Highly flammable liquid and vapour.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H335: May cause respiratory irritation.

Supplementary statement(s):

Not applicable.

Precautionary statements prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271 Use only a well-ventilated area.
P280 Wear protective gloves and protective clothing.
P240 Ground and bond container and receiving equipment.

Precautionary statements response:

P370+P378 In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P312 Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

Precautionary statement(s) storage: P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

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

2.3 Other hazards

methyl methacrylate Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)

This substance/mixture does not meet the criteria for classification as Persistent, Bioaccumulative, and Toxic (PBT) in accordance with Annex XIII, Commission Delegated Regulation (EU) 2017/2100, and Commission Regulation (EU) 2018/605.

This substance/mixture does not meet the criteria for classification as very Persistent and very Bioaccumulative (vPvB) in accordance with Annex XIII, Commission Delegated Regulation (EU) 2017/2100, and Commission Regulation (EU) 2018/605.

This substance/mixture does not meet the criteria for classification as Persistent, Mobile and Toxic (PMT) in accordance with Commission Delegated Regulation (EU) 2023/707.

This substance/mixture does not meet the criteria for classification as very Persistent and very Mobile (vPvM) in accordance with Commission Delegated Regulation (EU) 2023/707.

The substance/mixture does not contain components considered to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605, nor is it included in the list established under REACH Article 59(1), at concentrations equal to or greater than 0.1% (w/w).

No further product hazard information.

3. COMPOSITION AND INFORMATION ABOUT THE COMPONENTS

3.1 Substances

See 'Composition on ingredients' in Section 3.2.

3.2 Mixtures

Ingredient	Numbers	Classification (EC) 1272/2008	SCL / M-Factor	Nanoform Particle Characteristics	Concentration
Methyl Methacrylate *	CAS No: 80-62-6 EC-No: 201-297-1 Index-No: 607-035-00-6 REACH No: 01-2119452498-28	Flammable Liquids Category 2, Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3; H225, H315, H317, H335 [2]	Not available	Not available	25-50 % by weight
2-Ethylhexanoate	CAS No: 103-11-7 EC-No: 203-080-7 Index-No: 203-080-7 REACH No: 01-2119453158-37	Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3; H315, H317, H335 [2]	Not available	Not available	10-25 % by weight

Legend: 1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567; 3. Classification drawn from C&L; * EU IOELVs available; [e] Substance identified as having endocrine disrupting properties.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact: If this product comes in contact with the eyes:
Wash out immediately with water.
Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting then upper and lower lids.
Seek medical attention without delay; if pain persists or recurs seek medical attention.
Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin contact:	If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation:	If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay.
Ingestion:	Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11.

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

Treat symptomatically.

For Methyl Methacrylate:

Significant effects developing over a work-shift are not detected by symptomatology, blood pressure, respiratory function testing, haemoglobin and white cell count, urinalysis and blood chemistry. Effects may occur in high concentration exposure groups with regard to serum glucose and blood urea, nitrogen, cholesterol, albumin and total bilirubin values. Possible alterations occur in skin and nervous system symptomatology, urinalysis findings and serum triglycerides. Diagnostic signs taken as indicative of methyl methacrylate-induced local neurotoxicity include sensory nerve distal conduction velocities. These deficits appear to result from diffusion of the substance into neurons, lysis of membrane lipids and demyelination.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Foam, Dry chemical powder, BCF (where regulations permit), Carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Fire Incompatibility:

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

5.3 Advice for fire-fighters

Fire-fighting:

Alert fire brigade and tell them location and nature of hazard.
May be violently or explosively reactive.
Wear breathing apparatus plus protective gloves.
Prevent, by any means available, spillage from entering drains or water course.

Fire/explosion hazard:

Liquid and vapour are highly flammable.
Severe fire hazard when exposed to heat, flame and/or oxidisers.
Vapour may travel a considerable distance to source of ignition.
Heating may cause expansion or decomposition leading to violent rupture of containers.
Combustion products include:
- Carbon dioxide (CO₂)
- Nitrogen oxides (NO_x)
- Other pyrolysis products typical of burning organic material.
May emit clouds of acrid smoke.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

See Section 8.

6.2 Environmental Precautions

See Section 12.

6.3 Methods and material for containment and cleaning up

Minor spills:

Remove all ignition sources.

Clean up all spills immediately.

Avoid breathing vapours and contact with skin and eyes.

Control personal contact with the substance, by using protective equipment.

Major spills:

Clear area of personnel and move upwind.

Alert Fire Brigade and tell them location and nature of hazard.

May be violently or explosively reactive.

Wear breathing apparatus plus protective gloves.

6.4 Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Safe handling:

Containers, even those that have been emptied, may contain explosive vapours.

Do NOT cut, drill, grind, weld or perform similar operations on or near containers.

Avoid all personal contact, including inhalation.

Wear protective clothing when risk of overexposure occurs.

Use in a well-ventilated area.

Prevent concentration in hollows and sumps.

DO NOT allow clothing wet with material to stay in contact with skin.

Fire and explosion protection:

See Section 5.

Other information

Store below 38 deg. C.

Store in original containers in approved flame-proof area.

No smoking, naked lights, heat or ignition sources.

DO NOT store in pits, depression, basement or areas where vapours may be trapped.

Keep containers securely sealed.

7.2 Conditions for safe storage, including any incompatibilities

Suitable container:

For Acrylates or Methacrylates:

Storage tanks and pipes should be made of stainless steel or aluminium.

Although they do not corrode carbon steel, there is a risk of contamination if corrosion does occur.

Packing as supplied by manufacturer.

Plastic containers may only be used if approved for flammable liquid.

Check that containers are clearly labelled and free from leaks.

For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.

For materials with a viscosity of at least 2680 cSt. (23 deg. C)

For manufactured product having a viscosity of at least 250 cSt.

Storage incompatibility:

2-Ethylhexyl Acrylate:

May polymerise unless inhibited; heat, sunlight, contaminants or peroxides may cause polymerisation.

Reacts with strong oxidisers and may ignite or explode.

Is incompatible with strong acids, alkalis, aliphatic amines, alkanolamines, nitrates.

Uninhibited monomer vapour may block vents and confined spaces by forming solid polymer.

Methyl Acrylate:

May polymerise explosively when heated above 21 C, or in light, or when when inhibitor concentrations fall to low levels.

Storage containers may explode at elevated temperatures.

Reacts violently with strong oxidisers.

Is incompatible with strong acids, alkalis, aliphatic amines, alkanolamines, polyvinyl chloride, mercaptans, nitro-compounds, perborates, azides, ethers, ketones, aldehydes, nitrates, nitrites, reducing agents, acid anhydrides, acid chlorides, concentrated mineral acids, metal salts, strong bases.

Is usually stored below 10 deg C.

Vapour may block vents and confined spaces after forming solid polymers.

NOTE: Contact with alkali solutions will remove inhibitor and render material unstable on storage.

Avoid oxygen content of less than 5%.

Avoid strong acids, bases.

Avoid reaction with oxidising agents.

Hazard categories in accordance with Regulation (EC) No 2012/18/EU (Seveso III)

P5a: Flammable Liquids, P5b: Flammable Liquids, P5c: Flammable Liquids

Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of

P5a Lower- / Upper-tier requirements: 10 / 50

P5b Lower- / Upper-tier requirements: 50 / 200

P5c Lower- / Upper-tier requirements: 5 000 / 50 000

7.3. Specific end use(s)

See Section 1.2.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
Methyl Methacrylate	Dermal 13.67 mg/kg bw/day (Systemic, Chronic) Inhalation 348.4 mg/m ³ (Systemic, Chronic) Dermal 1.5 mg/cm ² (Local, Chronic) Inhalation 208 mg/m ³ (Local, Chronic) Dermal 1.5 mg/cm ² (Local, Acute) Inhalation 416 mg/m ³ (Local, Acute) Dermal 8.2 mg/kg bw/day (Systemic, Chronic) * Inhalation 74.3 mg/m ³ (Systemic, Chronic) * Oral 8.2 mg/kg bw/day (Systemic, Chronic) * Dermal 1.5 mg/cm ² (Local, Chronic) * Inhalation 104 mg/m ³ (Local, Chronic) * Dermal 1000 mg/cm ² (Local, Acute) * Inhalation 208 mg/m ³ (Local, Acute) *	0.94 mg/L (Water (Fresh)) 0.69 mg/L (Water - Intermittent release) 0.094 mg/L (Water (Marine)) 10.2 mg/kg sediment dw (Sediment (Fresh Water)) 1.02 mg/kg sediment dw (Sediment (Marine)) 1.48 mg/kg soil dw (Soil) 10 mg/L (STP)
2-Ethylhexyl Acrylate	Inhalation 38 mg/m ³ (Local, Chronic) Inhalation 38 mg/m ³ (Local, Acute)	0.00272 mg/L (Water (Fresh)) 0.011 mg/L (Water - Intermittent release) 0.000272 mg/L (Water (Marine)) 0.108 mg/kg sediment dw (Sediment (Fresh Water)) 0.0108 mg/kg sediment dw (Sediment (Marine)) 1 mg/kg soil dw (Soil) 2.3 mg/L (STP)

* Values for General Population.

Occupational Exposure Limits (OEL)

Ingredient data:

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	Methyl Methacrylate	Methyl methacrylate	50 ppm	100 ppm	Not available	Not available
UK Workplace Exposure Limits (WELs)	Methyl Methacrylate	Methyl methacrylate	50 ppm / 208 mg/m ³	416 mg/m ³ / 100 ppm	Not available	Not available

Emergency limits:

Ingredient	TEEL-1	TEEL-2	TEEL-3
Methyl Methacrylate	Not available	Not available	Not available
2-Ethylhexyl Acrylate	15 ppm	120 ppm	150 ppm

Ingredient	Original IDLH	Revised IDLH
Methyl Methacrylate	1,000 ppm	Not available
2-Ethylhexyl Acrylate	Not available	Not available

Occupational exposure banding:

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
2-Ethylhexyl Acrylate	E	≤ 0.1 ppm

Notes: Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

8.2 Exposure controls

8.2.1. Appropriate engineering Controls:	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
8.2.2. Personal protection:	
Eye and face protection:	Safety glasses with side shields. Chemical goggles. [EN166 or national equivalent] Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin protection:	See Hand Protection below.
Hands/feet protection:	Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber NOTE: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care.
Body protection:	See Other Protection below.
Other protection:	Overalls. PVC Apron. PVC protective suit may be required if exposure severe. Eyewash unit. Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity. For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets). Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot and shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds.

Respiratory protection:	Respiratory protection is only required in the likelihood that relevant exposure limits may be approached or exceeded, e.g. application in enclosed spaces with restricted air exchange. Concentrations of potentially hazardous substances in air will remain low during normal outdoor application and will not pose a risk to the applicator. Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent). Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate. Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used
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8.2.3 Environmental exposure controls

See Section 12.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important health, safety and environmental information

Appearance:	Coloured	Relative density (Water = 1):	1.04
Physical state:	Liquid	Partition coefficient n-octanol / water:	Not available
Odour:	Not available	Auto-ignition temperature (°C):	Not available
Odour threshold:	Not available	Decomposition temperature (°C):	Not available
pH (as supplied):	Not available	Viscosity (cSt):	Kinematic (20°C): 70 s (ISO 6mm)
Melting point/freezing point (°C):	Not available	Molecular weight (g/mol):	Not available
Initial boiling point and boiling range (°C):	101°C (MMA)	Taste:	Not available
Flash point (°C):	13°C (MMA)	Explosive properties:	Not available
Evaporation rate [kg/(s m²)]:	Not available	Oxidising properties:	Not available
Flammability:	HIGHLY FLAMMABLE	Surface Tension (dyn/cm or mN/m):	Not available
Upper Explosive Limit (%):	12.5 % (MMA)	Volatile Component (%vol):	Not available
Lower Explosive Limit (%):	1.7 % (MMA)	Gas group:	Not available
Vapour pressure (kPa):	38.7 (MMA)	pH as a solution (1%):	Not available
Solubility in water:	Immiscible	VOC g/L:	Not available
Vapour density (Air = 1):	Not available	Nanoform Particle Characteristics:	Not available
Nanoform Solubility:	Not available		
Particle Size:	Not available		

9.2 Other information

Not available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

See Section 7.2.

10.2 Chemical stability

Stable under controlled storage conditions provided material contains adequate stabiliser / polymerisation inhibitor.

Bulk storages may have special storage requirements

WARNING: Gradual decomposition in strong, sealed containers may lead to a large pressure build-up and subsequent explosion. Rapid and violent polymerisation possible at temperatures above 32 deg c.

10.3 Possibility of hazardous reactions

See Section 7.2.

10.4 Conditions to avoid

See Section 7.2.

10.5 Incompatible materials

See Section 7.2.

10.6. Hazardous decomposition products

See Section 5.3.

11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

a) Acute Toxicity	Based on available data, the classification criteria are not met.
b) Skin Irritation/Corrosion	There is sufficient evidence to classify this material as skin corrosive or irritating.
c) Serious Eye Damage/Irritation	Based on available data, the classification criteria are not met.
d) Respiratory or Skin sensitisation	There is sufficient evidence to classify this material as sensitising to skin or the respiratory system
e) Mutagenicity	Based on available data, the classification criteria are not met.
f) Carcinogenicity	Based on available data, the classification criteria are not met.
g) Reproductivity	Based on available data, the classification criteria are not met.
h) STOT - Single Exposure	There is sufficient evidence to classify this material as toxic to specific organs through single exposure
i) STOT - Repeated Exposure	Based on available data, the classification criteria are not met.
j) Aspiration Hazard	Based on available data, the classification criteria are not met.

Inhaled:	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Workers in plants manufacturing methyl methacrylate may experience headaches, pains in the extremities, tiredness, memory loss and sleep disturbance, with hormonal disturbance in women. Inhalation of the substance may cause low blood pressure, central nervous system depression, liver and kidney degeneration and death from failure of breathing. The material has NOT been classified by EC Directives or other classification systems as "harmful by inhalation". This is because of the lack of corroborating animal or human evidence. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.
Ingestion:	At sufficiently high doses the material may be hepatotoxic (i.e. poisonous to the liver). Oral doses can produce low blood pressure, central nervous system depression and drowsiness, liver and kidney degeneration and death after cessation of breathing. The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal. Accidental ingestion of the material may be damaging to the health of the individual.
Skin Contact:	The material may accentuate any pre-existing dermatitis condition. Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.

	Reports of dental technicians, surgeons and manufacturing employees with direct skin contact with methyl methacrylate show altered sensation such as numbing and tingling sensation on the fingers, with mild local nerve damage. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. The material may cause severe inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.
Eye:	There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain.
Chronic:	Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Prolonged and repeated exposures can cause liver and kidney damage, low blood pressure and heart attack. There may be increased deaths from colon or rectal cancer. Long term local injection may cause tumour of the local tissues. When inhaled, it may cause watery and sore nostrils and destruction of the organ of smell. Respiratory sensitisation may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping.

Caltech FCP Finish Resin:

Toxicity	Irritation
Not available	Not available

Methyl Methacrylate:

Toxicity	Irritation
Dermal (Rabbit) LD50: >5000 mg/kg[2]	Eye (Rabbit): 150 mg
Inhalation (Rat) LC50: 29.8 mg/l4h[1]	Skin (Rabbit): 10000 mg/kg (open)
Oral (Rat) LD50: 7872 mg/kg[2]	Skin (Human - woman): 2%/48H
	Skin (Rodent - rabbit): 10gm
	Skin: adverse effect observed (irritating)[1]

2-Ethylhexyl Acrylate

Toxicity	Irritation
Dermal (Rabbit) LD50: >177 mg/kg[1]	Eyes (Rabbit) 500mg/24h mild
Oral (Mouse) LD50: >5000 mg/kg[1]	Eye (Rodent - rabbit): 5mg - Severe
	Eye: no adverse effect observed (not irritating)[1]
	Skin (Rodent - rabbit): 10mg/24H - Severe
	Skin (Rodent - rabbit): 20mg/24H - Moderate
	Skin (Rodent - rabbit): 500mg - Mild
	Skin: adverse effect observed (irritating)[1]

Legend:

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances.

Caltech FCP Finish Resin	Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be genetically more prone than others, and exposure to other irritants may aggravate symptoms. Allergy causing activity is due to interactions with proteins. Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.
Methyl Methacrylate:	Inhalation (human) TClO: 60 mg/m³(15 ppm) [* Manuf. Rohm & Haas] The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.
2-Ethylhexyl Acrylate:	Substance has been investigated as a tumourigen on mouse skin. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.
Caltech FCP Finish Resin & Methyl Methacrylate & 2-Ethylhexyl Acrylate:	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.
Caltech FCP Finish Resin & Methyl Methacrylate:	MMA is absorbed after inhalation, oral intake and less readily through the skin. Following inhalation it is partly deposited in the airway where it is metabolised by local enzymes. Acute toxicity is low. Skin, eye and airway irritation can result as well as degeneration of the smell function of the nose.
Caltech FCP Finish Resin & 2-Ethylhexyl Acrylate:	For 2-ethylhexyl acrylate: Animal testing shows that 2-ethylhexyl acrylate can cause skin sensitisation and damage sensation of smell, and that chronic exposure can increase the incidence of kidney inflammation. High doses may cause developmental effects. Testing has shown that 2-ethylhexyl acrylate may cause genetic damage and/or mutations. It has not been shown to cause tumours except at very high doses.
Methyl Methacrylate & 2-Ethylhexyl Acrylate:	Where no "official" classification for acrylates and methacrylates exists, there have been cautious attempts to create classifications in the absence of contrary evidence. For example: Monoalkyl or monoarylesters of acrylic acids should be classified as R36/37/38 and R51/53 Monoalkyl or monoaryl esters of methacrylic acid should be classified as R36/37/38. Based on the available oncogenicity data and without a better understanding of the carcinogenic mechanism the Health and Environmental Review Division (HERD), Office of Toxic Substances (OTS), of the US EPA previously concluded that all chemicals that contain the acrylate or methacrylate moiety (CH₂=CHCOO or CH₂=C(CH₃)COO) should be considered to be a carcinogenic hazard unless shown otherwise by adequate testing. This position has now been revised and acrylates and methacrylates are no longer de facto carcinogens.

Acute Toxicity	✗	Carcinogenicity	✗
Skin Irritation/Corrosion	✓	Reproductivity	✗
Serious Eye Damage/Irritation	✗	STOT - Single Exposure	✓
Respiratory or Skin Sensitisation	✓	STOT - Repeated Exposure	✗
Mutagenicity	✗	Aspiration Hazard	✗

Legend:

- ✗ - Data either not available or does not fill the criteria for classification.
✓ - Data available to make classification.

11.2 Additional information

11.2.1 Endocrine disruption properties

Not available.

11.2.2 Other information

See Section 11.1.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Caltech FCP Finish Resin:

End point	Test duration (Hr)	Species	Value	Source
Not available	Not available	Not available	Not available	Not available

Methyl Methacrylate:

End point	Test duration (Hr)	Species	Value	Source
EC0(ECx)	48h	Crustacea	48mg/l	1
EC50	72h	Algae or other aquatic plants	>110mg/l	2
EC50	48h	Crustacea	69mg/l	1
LC50	96h	Fish	>79mg/l	2
EC50	96h	Algae or other aquatic plants	170mg/l	1

2-Ethylhexyl Acrylate

End point	Test duration (Hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	1.71mg/l	2
EC50	48h	Crustacea	1.3mg/l	2
NOEC(ECx)	504h	Crustacea	0.136mg/l	2
LC50	96h	Fish	1.1mg/l	2
EC50	96h	Algae or other aquatic plants	2.65mg/l	2

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

For Methyl Methacrylate (MMA):

Koc: 87; Log Pow: 1.83; Half-life (hr) air: 2.7-3; Half-life (hr) H₂O surface water: 6.3-336; Henry's atm m³/mol: 3.24E-04; BOD₅: 0.14; log BCF: 0.55.

Environmental Fate: The environmental behavior of MMA is determined by its range of 1.1-9.7 hours atmospheric half-life and moderate volatility. MMA is readily biodegradable. The air, and to a much lower extent, the water, are the preferred target compartments for distribution and neither relevant bioaccumulation nor geo-accumulation are expected.

For 2-Ethyl Acrylate:

Koc: 363

Half-life (hr) air: 10.3

Half-life (hr) H₂O surface water: 7-65

BCF: 183-53890

Environmental fate:

Air: 2-Ethylhexyl acrylate is expected to exist almost entirely in the vapour phase based on its vapour pressure. It may photolyse in sunlight. It will react with photochemically produced hydroxyl radicals and ozone with an estimated half-life of 10.3 hours.

Water: 2-Ethylhexyl acrylate is not expected to adsorb to sediment or suspended particulate matter.

Substances containing unsaturated carbons are ubiquitous in indoor environments. They result from many sources (see below). Most are reactive with environmental ozone and many produce stable products which are thought to adversely affect human health. The potential for surfaces in an enclosed space to facilitate reactions should be considered.

Source of unsaturated substances Unsaturated substances (Reactive Emissions) Major Stable Products produced following reaction with ozone.

DO NOT discharge into sewer or waterways.

12.2 Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Methyl Methacrylate	LOW	LOW
2-Ethylhexyl Acrylate	LOW	LOW

12.3 Bioaccumulation potential

Ingredient	Bioaccumulation
Methyl Methacrylate	LOW (BCF = 6.6)
2-Ethylhexyl Acrylate	LOW (BCF = 289.73)

12.4 Mobility in soil

Ingredient	Mobility
Methyl Methacrylate	LOW (KOC = 10.14)
2-Ethylhexyl Acrylate	LOW (KOC = 429)

12.5 Results of PBT and vPvB assessment

	P	B	T	PBT criteria fulfilled?	vP	vB	vPvB criteria fulfilled?
Caltech FCP Finish Resin	✗	✗	✗	No	✗	✗	No
Methyl Methacrylate	No data available	No data available	No data available	No	No data available	No data available	No
2-Ethylhexyl Acrylate	No data available	No data available	No data available	No	No data available	No data available	No

12.6 Endocrine Disruption Properties

No evidence of endocrine disrupting properties were found in the current literature.

12.7. Other adverse effects

No evidence of ozone depleting properties were found in the current literature.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal Considerations:	Disposal of this product and its packaging must comply with all applicable environmental protection and waste disposal legislation, including any requirements set by local authorities. Any unwanted or non-recyclable material should be disposed of through a licensed waste disposal contractor. Transportation of such waste may be subject to ADR (International Carriage of Dangerous Goods by Road) regulations and must be managed in accordance with those requirements.
Waste code:	Uncured product: 08 01 11* waste paint and varnish containing organic solvents or other hazardous substances. Cured product inert residue: 17 09 04 mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03 Empty metal paint tins with only hardened, inert residue: 15 01 04 metallic packaging
Special precautions:	This material and its container must be disposed of in a safe way. Caution should be exercised when handling empty containers that have not been properly cleaned or rinsed, as they may retain hazardous residues. Spillage and wash water from cleaning tools must be

	prevented from entering soil, watercourses, drains, or sewer systems. Empty containers should be directed to authorised waste disposal or appropriate local recycling facilities.
Further information available via:	https://www.alumascroofing.com/downloads/disposal-guides/ 

14. TRANSPORT INFORMATION

Labels required:



Marine Pollutant: No.

Hazchem: ●3Y; ●3YE

Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1 UN number	Not Applicable
14.2 UN proper shipping name	Not Applicable
14.3 Transport hazard class(es)	Class: Not Applicable Subrisk: Not Applicable
14.4 Packing group	Not Applicable
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	Hazard identification (Kemler): Not Applicable Classification code: Not Applicable Hazard label: Not Applicable Special provisions: Not Applicable Limited quantity: Not Applicable Tunnel restriction code: Not Applicable

Air transport (ICAO-IATA/DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1 UN number	Not Applicable
14.2 UN proper shipping name	Not Applicable
14.3 Transport hazard class(es)	ICAO/IATA class: Not Applicable ICAO/IATA subrisk: Not applicable ERG code: Not Applicable
14.4 Packing group	Not Applicable
14.5 Environmental hazard	Not Applicable
14.6 Special precautions for user	Special provisions: Not Applicable Cargo only packing instruction: Not Applicable Cargo only maximum qty/pack: Not Applicable Passenger and cargo packing instruction: Not Applicable Passenger and cargo maximum qty/pack: Not Applicable Passenger and cargo limited qty packing instructions: Not Applicable Passenger and cargo limited maximum qty/pack: Not Applicable

Sea transport (IMDG-Code/GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1 UN number	Not Applicable
14.2 UN proper shipping name	Not Applicable
14.3 Transport hazard class(es)	IMDG class: Not Applicable IMDG subrisk: Not Applicable
14.4 Packing group	Not Applicable
14.5 Environmental hazard	Not Applicable

14.6 Special precautions for user	EMS number: Special provisions: Limited quantities:	Not Applicable Not Applicable Not Applicable
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Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Main transport hazard (14.2): Not Applicable		
14.1 UN number	Not Applicable	
14.2 UN proper shipping name	Not Applicable	
14.3 Transport hazard class(es)	3	Not Applicable
14.4 Packing group	Not Applicable	
14.5 Environmental hazard	Not Applicable	
14.6 Special precautions for user	Classification code:	Not Applicable
	Special provisions:	Not Applicable
	Limited quantity:	Not Applicable
	Equipment required:	Not Applicable
	Fire cones numbers:	Not Applicable

14.7. Maritime transport in bulk according to IMO instruments

14.7.1 Transport in bulk according to Annex II of MARPOL and the IBC code

Not applicable.

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product Name	Group
Methyl Methacrylate	Not available
2-Ethylhexyl Acrylate	Not available

14.7.3. Transport in bulk in accordance with the ICG Code

Product Name	Ship Type
Methyl Methacrylate	Not available
2-Ethylhexyl Acrylate	Not available

15. REGULATORY INFORMATION

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

Methyl Methacrylate is found on the following regulatory lists:

EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)
EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances
EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
Europe EC Inventory
Europe European Customs Inventory of Chemical Substances- ECICS
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI (ATP21)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

2-Ethylhexyl is found on the following regulatory lists:

Europe EC Inventory
Europe European Customs Inventory of Chemical Substances- ECICS
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI (ATP21)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans

Additional Regulatory Information

Not Applicable

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC,- 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

Information according to 2012/18/EU (Seveso III):

Seveso Category P5a, P5b, P5c

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

ECHA SUMMARY

Ingredient	CAS number	Index No	ECHA Dossier
methyl methacrylate	80-62-6	607-035-00-6	01-2119452498- 28

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Flammable Liquids Category 2; Skin Corrosion/Irritation Category 2; Sensitisation (Skin) Category 1; Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3	GHS07; GHS02; Dgr	H225; H315; H317; H335
2	Flammable Liquids Category 2; Skin Corrosion/Irritation Category 2; Sensitisation (Skin) Category 1; Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3; Acute Toxicity (Oral) Category 5; Hazardous to the Aquatic Environment Acute Hazard Category 3; Serious Eye Damage/Eye Irritation Category 2; Sensitisation (Respiratory) Category 1; Reproductive Toxicity Category 2; Specific Target Organ Toxicity - Repeated Exposure Category 1; Hazardous to the Aquatic Environment Long-Term Hazard Category 3; Acute Toxicity (Oral) Category 3	GHS02; Dgr; GHS08; GHS06	H225; H315; H317; H335; H333; H402; H370; H319; H334; H361; H372; H228; H412; H301

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
2-ethylhexyl acrylate	103-11-7	607-107-00-7	01-2119453158-37

National inventory status:

National Inventory	Status
Australia - AIIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (methyl methacrylate; 2-ethylhexyl acrylate)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory 'Active'
Taiwan - TCSI	Yes
Mexico - INSQ	Yes

Vietnam - NCI	Yes
Russia - FBEPH	Yes
UAE - Control List (Banned/Restricted Substances)	No (methyl methacrylate; 2-ethylhexyl acrylate)
Legend:	Yes = All CAS declared ingredients are on the inventory. No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

16. OTHER INFORMATION

SDS version summary:

Version	Date of Update	Section Updated
1.1	14/06/2023	Template change
2.0	27/05/2025	Section 13 update
3.0	05/05/2026	Toxicological information - Acute Health (eye), Toxicological information - Acute Health (inhaled), Toxicological information - Acute Health (swallowed), Toxicological information - Chronic Health, Hazards identification - Classification, Ecological Information - Environmental, First Aid measures - First Aid (eye), Composition / information on ingredients - Ingredients, Identification of the substance / mixture and of the company / undertaking – Supplier Information

Full text Risk and Hazard codes

H227 Combustible liquid.
H228 Flammable solid.
H301 Toxic if swallowed.
H303 May be harmful if swallowed.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H333 May be harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H361 Suspected of damaging fertility or the unborn child.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.
H401 Toxic to aquatic life.
H402 Harmful to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Other information:

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

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. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices

Definitions and abbreviations:

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit
IDLH: Immediately Dangerous to Life or Health Concentrations
ES: Exposure Standard
OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index
AII: Australian Inventory of Industrial Chemicals
DSL: Domestic Substances List
NDSL: Non-Domestic Substances List
IECSC: Inventory of Existing Chemical Substance in China
EINECS: European INventory of Existing Commercial chemical Substances
ELINCS: European List of Notified Chemical Substances
NLP: No-Longer Polymers
ENCs: Existing and New Chemical Substances Inventory
KECI: Korea Existing Chemicals Inventory
NZIoC: New Zealand Inventory of Chemicals
PICCS: Philippine Inventory of Chemicals and Chemical Substances
TSCA: Toxic Substances Control Act
TCSI: Taiwan Chemical Substance Inventory
INSQ: Inventario Nacional de Sustancias Químicas
NCI: National Chemical Inventory
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	Classification Procedure
Flammable Liquids Category 2, H225	On basis of test data
Skin Corrosion/Irritation Category 2, H315	Calculation method
Sensitisation (Skin) Category 1, H317	Calculation method
Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, H335	Calculation method

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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