

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

### 1.1 Product identifier

Trade name/designation: Caltech FCP-LO Resin

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

Relevant identified uses: Use according to manufacturer's directions.

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](mailto: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]:

H315 - Skin Corrosion/Irritation Category 2, H317 - Sensitisation (Skin) Category 1, H319 - Serious Eye Damage/Eye Irritation Category 2, H351 - Carcinogenicity Category 2, H361 - Reproductive Toxicity Category 2, H373 - Specific Target Organ Toxicity - Repeated Exposure Category 2, H411 - Hazardous to the Aquatic Environment Long-Term Hazard Category 2

### 2.2 Label elements

Hazard pictures:



Signal word:

Warning

Hazardous component(s) to be indicated on label:

Material contains 2-hydroxyethyl methacrylate, p-tert-Butylstyrene, styrene, naphtha petroleum, heavy, hydrotreated.

Hazard statements:

H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H319: Causes serious eye irritation.  
H351: Suspected of causing cancer.  
H361: Suspected of damaging fertility or the unborn child.  
H373: May cause damage to organs through prolonged or repeated exposure. (ears) (Inhalation)  
H411: Toxic to aquatic life with long lasting effects.

Precautionary statements prevention:

P260: Do not breathe mist/vapours/spray.  
P280: Wear protective gloves, protective clothing, eye protection and face protection.  
P273: Avoid release to the environment.  
P202: Do not handle until all safety precautions have been read and understood.

Precautionary statements response:

P308+P313: IF exposed or concerned: Get medical advice/ attention.  
P302+P352: IF ON SKIN: Wash with plenty of water and soap.



P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P314: Get medical advice/attention if you feel unwell.

Precautionary statement(s) Storage    P405: Store locked up..

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

### 2.3 Other hazards

styrene	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)
styrene	The material within this SDS meets the criteria for persistent, bioaccumulative and toxic in accordance with Annex XIII.
TCP	Determined to have endocrine-disrupting properties according to Europe Regulation (EU) 528/2012, Europe Regulation (EU) 2017/2100, and Europe Regulation (EU) 2018/605.

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

1.CAS No 2.EC No 3.Index No 4.REACH No	% [weight]	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	SCL / M-Factor	Nanoform Particle Characteristics
1. 868-77-9 2.212-782-2 3.607-124-00-X 4.Not Available	7.23-14.24	2-hydroxyethyl methacrylate	Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2; H315, H317, H319 [2]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not available



1. 1746-23-2 2.217-126-9 3.Not Available 4.Not Available	4.5-8.24	p-tert-Butylstyrene	Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2, Acute Toxicity (Inhalation) Category 4, Reproductive Toxicity Category 2, Hazardous to the Aquatic Environment Acute Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 1; H315, H319, H332, H361f, H400, H410 [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: 1	Not available
1. 100-42-5 2.202-851-5 3.601-026-00-0 4.Not Available	2.4-2.9	styrene	Flammable Liquids Category 3, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2, Acute Toxicity (Inhalation) Category 4, Reproductive Toxicity Category 2, Specific Target Organ Toxicity - Repeated Exposure Category 1; H226, H315, H319, H332, H361d, H372 [2]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not available
1. 1244733-77-4 Not Available Not Available Not Available	1.5-1.6	TCPP [e]	Acute Toxicity (Oral) Category 4, Carcinogenicity Category 2, Hazardous to the Aquatic Environment Long-Term Hazard Category 3; H302, H351, H412 [1]	SCL: Not Available Acute M factor: 10 Chronic M factor: 1	Not available
1. 64742-48-9. 2.265-150-3 3.649-327-00-6 4.None	1-2	naphtha petroleum, heavy, ... hydrotreated	Flammable Liquids Category 3, Aspiration Hazard Category 1, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3; H226, H304, H336, EUH066 [1]	SCL: Not Available Acute M factor: Not Applicable Chronic M factor: Not Applicable	Not available
<b>Legend:</b>	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 fresh running water.  
Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the 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.  
Other measures are usually unnecessary.
- 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.

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.

Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO<sub>2</sub> 50 mm Hg) should be intubated.

Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.

A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.

Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

Treat symptomatically.

## 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
- Fire Fighting** Alert Fire Brigade and tell them location and nature of hazard.  
Wear full body protective clothing with breathing apparatus.  
Prevent, by any means available, spillage from entering drains or water course.  
Use fire fighting procedures suitable for surrounding area.
- Fire/Explosion Hazard** carbon dioxide (CO<sub>2</sub>)  
nitrogen oxides (NO<sub>x</sub>)  
other pyrolysis products typical of burning organic material.

## 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

- Environmental hazard - contain spillage.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.



## Major Spills

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by all means available, spillage from entering drains or water courses.
- Environmental hazard - contain spillage.

## 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:

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with moisture.
- DO NOT allow clothing wet with material to stay in contact with skin**

#### Fire and explosion protection

See section 5

#### Other information

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.

### 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.
- Polyethylene or polypropylene container.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

#### Storage incompatibility:

#### For alkyl aromatics:

The alkyl side chain of aromatic rings can undergo oxidation by several mechanisms. The most common and dominant one is the attack by oxidation at benzylic carbon as the intermediate formed is stabilised by resonance structure of the ring. Following reaction with oxygen and under the influence of sunlight, a hydroperoxide at the alpha-position to the aromatic ring, is the primary oxidation product formed (provided a hydrogen atom is initially available at this position) - this product is often short-lived but may be stable dependent on the nature of the aromatic substitution; a secondary C-H bond is more easily attacked than a primary C-H bond whilst a tertiary C-H bond is even more susceptible to attack by oxygen. Monoalkylbenzenes may subsequently form monocarboxylic acids; alkyl naphthalenes mainly produce the corresponding naphthalene carboxylic acids. Oxidation in the presence of transition metal salts not only accelerates but also selectively decomposes the hydroperoxides. Vigorous reactions, sometimes amounting to explosions, can result from the contact between aromatic rings and strong oxidising agents. Aromatics can react exothermically with bases and with diazo compounds.

#### Styrene:

requires inhibition with adequate levels of substituted phenol (such as tert-butylcatechol to prevent polymerisation - material that has had inhibitor removed, e.g. is uninhibited, must be refrigerated and used within 24 hours, i.e. not stored; contact with alkali solutions or glycols will remove inhibitor and render material unstable on storage polymerisation may cause container to explode polymerisation may be caused by elevated temperatures (above 66 deg C.), butyl lithium, peroxides, UV light, or sunlight reacts violently with chlorosulfonic acid, strong oxidisers, sulfuric acid, xenon tetrafluoride



is incompatible with acids, rust, catalysts for vinyl polymerisation, 2,5-dimethyl-2,5-di(tert-butylperox)hexane, peroxides, metals salts (e.g., aluminium chloride, copper chlorate, manganese nitrate, etc.)  
corrodes copper and its alloys  
attacks some plastics, rubber or coatings  
flow or agitation may generate electrostatic charges due to low conductivity  
uninhibited monomer vapour may block vents and confined spaces by forming solid polymer

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

E2: Hazardous to the Aquatic Environment in Category Chronic 2

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

E2 Lower- / Upper-tier requirements: 200 / 500

**7.3. Specific end use(s)**

See section 1.2

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

Ingredient	DNELs Exposure Pattern Worker	PNELs Compartment
2-hydroxyethyl methacrylate	Dermal 1.39 mg/kg bw/day (Systemic, Chronic) Inhalation 4.9 mg/m <sup>3</sup> (Systemic, Chronic) Dermal 0.83 mg/kg bw/day (Systemic, Chronic) * Inhalation 1.45 mg/m <sup>3</sup> (Systemic, Chronic) * Oral 0.83 mg/kg bw/day (Systemic, Chronic) *	0.482 mg/L (Water (Fresh)) 1 mg/L (Water - Intermittent release) 0.048 mg/L (Water (Marine)) 3.79 mg/kg sediment dw (Sediment (Fresh Water)) 3.79 mg/kg sediment dw (Sediment (Marine)) 0.476 mg/kg soil dw (Soil) 10 mg/L (STP)
p-tert-Butylstyrene	Dermal 0.467 mg/kg bw/day (Systemic, Chronic) Inhalation 0.329 mg/m <sup>3</sup> (Systemic, Chronic) Dermal 0.167 mg/kg bw/day (Systemic, Chronic) * Inhalation 0.058 mg/m <sup>3</sup> (Systemic, Chronic) * Oral 0.0167 mg/kg bw/day (Systemic, Chronic) *	0.003 mg/L (Water (Fresh)) 0.0003 mg/L (Water (Marine)) 0.012 mg/kg sediment dw (Sediment (Fresh Water)) 0.0012 mg/kg sediment dw (Sediment (Marine)) 0.00063 mg/kg soil dw (Soil) 0.011 mg/L (STP)
styrene	Dermal 406 mg/kg bw/day (Systemic, Chronic) Inhalation 85 mg/m <sup>3</sup> (Systemic, Chronic) Inhalation 100 mg/m <sup>3</sup> (Local, Chronic) Inhalation 100 mg/m <sup>3</sup> (Local, Acute) Inhalation 100 mg/m <sup>3</sup> (Local, Acute) Dermal 343 mg/kg bw/day (Systemic, Chronic) * Inhalation 1 mg/m <sup>3</sup> (Systemic, Chronic) * Oral 0.0077 mg/kg bw/day (Systemic, Chronic) * Inhalation 1 mg/m <sup>3</sup> (Local, Chronic) * Inhalation 10 mg/m <sup>3</sup> (Systemic, Acute) * Inhalation 10 mg/m <sup>3</sup> (Local, Acute) *	0.028 mg/L (Water (Fresh)) 0.04 mg/L (Water - Intermittent release) 0.014 mg/L (Water (Marine)) 0.418 mg/kg sediment dw (Sediment (Fresh Water)) 0.307 mg/kg sediment dw (Sediment (Marine)) 0.146 mg/kg soil dw (Soil) 5 mg/L (STP)
TCPP	Dermal 2.91 mg/kg bw/day (Systemic, Chronic) Inhalation 8.2 mg/m <sup>3</sup> (Systemic, Chronic) Inhalation 22.6 mg/m <sup>3</sup> (Systemic, Acute) Dermal 1.04 mg/kg bw/day (Systemic, Chronic) * Inhalation 1.45 mg/m <sup>3</sup> (Systemic, Chronic) * Oral 0.52 mg/kg bw/day (Systemic, Chronic) * Inhalation 5.6 mg/m <sup>3</sup> (Systemic, Acute) * Oral 2 mg/kg bw/day (Systemic, Acute) *	0.32 mg/L (Water (Fresh)) 0.51 mg/L (Water - Intermittent release) 0.032 mg/L (Water (Marine)) 11.5 mg/kg sediment dw (Sediment (Fresh Water)) 1.15 mg/kg sediment dw (Sediment (Marine)) 0.34 mg/kg soil dw (Soil) 19.1 mg/L (STP) 11.6 mg/kg food (Oral)

\* Values for General Population




**Occupational Exposure Limits (OEL)**  
**INGREDIENT DATA**

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs)	styrene	Styrene	100 ppm / 430 mg/m <sup>3</sup>	1080 mg/m <sup>3</sup> / 250 ppm	Not Available	Not Available
European Union Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work	naphtha petroleum, heavy, hydrotreated	Mineral oils that have been used before in internal combustion engines to lubricate and cool the moving parts within the engine	Not Available	Not Available	Not Available	(10) Substantial contribution to the total body burden via dermal exposure possible.

Ingredient	Original IDLH	Revised IDLH
2-hydroxyethyl methacrylate	Not Available	Not Available
p-tert-Butylstyrene	Not Available	Not Available
styrene	700 ppm	Not Available
TCPP	Not Available	Not Available
naphtha petroleum, heavy, hydrotreated	2,500 mg/m <sup>3</sup>	Not Available
2-hydroxyethyl methacrylate	Not Available	Not Available

**8.2 Exposure controls**

8.2.1. Appropriate engineering Controls:	<p>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.</p> <p>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.</p>
8.2.2. Personal protection:	
Eye and face protection:	<p>Safety glasses with side shields. Chemical goggles. [AS/NZS 1337.1, 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.</p>
Skin protection:	<p>See Hand protection below.</p>
Hands/feet protection:	<p>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.</p>



	Personal hygiene is a key element of effective hand care.
Body protection:	See Other protection below
Other protection	<p>Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely.</p> <p>Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood.</p> <p>Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood.</p> <p>Overalls. P.V.C apron. Barrier cream. Skin cleansing cream.</p>
Respiratory protection	<p><b>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.</b></p> <p>Type A Filter of sufficient capacity. (AS/NZS 1716 &amp; 1715, EN 143:2000 &amp; 149:2001, ANSI Z88 or national equivalent)</p> <p>Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.</p> <p>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.</p> <p>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</p>

### 8.2.3. Environmental exposure controls

See section 12

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Important health, safety and environmental information

Physical state:	Liquid	Relative density (Water = 1)	1.42-1.45
Colour:	Grey	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)	500-750 MPAS
Melting point/freezing point (°C):	Not Available	Molecular weight (g/mol)	Not Available
Boiling point (°C):	Not Available	Taste	Not Available
Flash point (°C):	Not Available	Oxidising properties	Not Available
Evaporation rate [kg/(s m²)]:	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Flammability	Not Available	Volatile Component (%vol)	Not Available
Upper Explosive Limit (%):	Not Available	Gas group	Not Available



<b>Lower Explosive Limit (%):</b>	Not Available	<b>pH as a solution (1%)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Not Available	<b>VOC g/L</b>	Not Available
<b>Solubility in water</b>	Immiscible	<b>Ignition Distance (cm)</b>	Not Available
<b>Vapour density (Air = 1)</b>	Not Available	<b>Flame Duration (s)</b>	Not Available
<b>Heat of Combustion (kJ/g)</b>	Not Available	<b>Enclosed Space Ignition Deflagration Density (g/m3)</b>	Not Available
<b>Flame Height (cm)</b>	Not Available	<b>Nanoform Particle Characteristics</b>	Not Available
<b>Enclosed Space Ignition Time Equivalent (s/m3)</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Nanoform Solubility</b>	Not Available		
<b>Particle Size Not Available</b>	Not Available		

## 9.2 Other information

Not Available

## 10. STABILITY AND REACTIVITY

### 10.1.Reactivity

See section 7.2

### 10.2. Chemical stability

Unstable in the presence of incompatible materials.  
Product is considered stable.  
Hazardous polymerisation will not occur

### 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	There is sufficient evidence to classify this material as eye damaging or irritating.
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	There is sufficient evidence to classify this material as carcinogenic.
g) Reproductivity	There is sufficient evidence to classify this material as toxic to reproductivity.
h) STOT - Single Exposure	Based on available data, the classification criteria are not met.
i) STOT - Repeated Exposure	There is sufficient evidence to classify this material as toxic to specific organs through repeated exposure.
j) Aspiration Hazard	Based on available data, the classification criteria are not met.



Inhaled:	<p>The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.</p> <p>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. The acute toxicity of inhaled alkylbenzene is best described by central nervous system depression. These compounds may also act as general anaesthetics. Whole body symptoms of poisoning include light-headedness, nervousness, apprehension, a feeling of well-being, confusion, dizziness, drowsiness, ringing in the ears, blurred or double vision, vomiting and sensations of heat, cold or numbness, twitching, tremors, convulsions, unconsciousness, depression of breathing, and arrest. Heart stoppage may result from cardiovascular collapse.</p>
Ingestion:	<p>The material has <b>NOT</b> 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.</p>
Skin contact:	<p>This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>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.</p> <p>The liquid may be able to be mixed with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives..</p>
Eye:	<p>This material causes serious eye irritation.</p>
Chronic:	<p>Strong evidence exists that this substance may cause irreversible mutations (though not lethal) even following a single exposure.</p> <p>Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>There is ample evidence that this material can be regarded as being able to cause cancer in humans based on experiments and other information.</p> <p>Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.</p> <p>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.</p> <p>Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility. Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother.</p> <p>Repeated application of mildly hydrotreated oils (principally paraffinic), to mouse skin, induced skin tumours; no tumours were induced with severely hydrotreated oils.</p> <p>Steam-cracked residues can increase the incidence of skin tumours.</p> <p>Exposure to styrene may aggravate central nervous system disorders, chronic respiratory disease, skin disease, kidney disease and liver disease. Exposure to styrene at work causes effects on the nervous system.</p>

**Caltech FCP-LO Resin**

Toxicity	Irritation
Not available	Not available

**2-hydroxyethyl methacrylate**

Toxicity	Irritation
Dermal (rabbit) LD50: >3000 mg/kg[2]	Eye: adverse effect observed (irritating)[1]
Oral (Rat) LD50: >=2000 mg/kg[1]	Skin (Human - woman): 2%
	Skin (Human - woman): 2%/48H
	Skin: no adverse effect observed (not irritating)[1]



**p-tert-Butylstyrene**

Toxicity	Irritation
Dermal (rabbit) LD50: >4375 mg/kg[1]	Eye: adverse effect observed (irritating)[1]
Inhalation (Rat) LC50: >16.891 mg/L4h[1]	Skin: adverse effect observed (irritating)[1]
Oral (Mouse) LD50; 1072.2 mg/kg[1]	

**styrene**

Toxicity	Irritation
dermal (rat) LD50: >2000 mg/kg[1]	Eye (Human): 50ppm - Mild
Inhalation (Mouse) LC50: 9.5 mg/L4h[2]	Eye (Rodent - rabbit): 100mg - Severe
Oral (Mouse) LD50; 316 mg/kg[2]	Eye (Rodent - rabbit): 100mg/24H - Moderate
	Skin (Human): 500mg
	Skin (Rodent - rabbit): 100% - Moderate
	Skin (Rodent - rabbit): 500mg - Mild

**TCPP**

Toxicity	Irritation
dermal (rat) LD50: >2000 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
Inhalation (Rat) LC50: >4.6 mg/l4h[1]	Skin: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: >500<2000 mg/kg[1]	

**naphtha petroleum, heavy, hydrotreated**

Toxicity	Irritation
Dermal (rabbit) LD50: >1900 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
Inhalation (Rat) LC50: >4.42 mg/L4h[1]	Skin: adverse effect observed (irritating)[1]
Oral (Rat) LD50: >4500 mg/kg[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-LO Resin	Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects, with the possibility of producing mutation. Data demonstrate that during inhalation exposure, aromatic hydrocarbons undergo substantial partitioning into adipose tissues. Following cessation of exposure, the level of aromatic hydrocarbons in body fats rapidly declines. Thus, the aromatic hydrocarbons are unlikely to bioaccumulate in the body. Selective partitioning of the aromatic hydrocarbons into the non-adipose tissues is unlikely.
2-HYDROXYETHYL METHACRYLATE	Dermal (rabbit): >5000 mg/kg* Effects persist beyond 21 days 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.
STYRENE	The material may cause 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. WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
NAPHTHA PETROLEUM, HEAVY, HYDROTREATED	Animal studies indicate that normal, branched and cyclic paraffins are absorbed from the gastrointestinal tract and that the absorption of nparaffins is inversely proportional to the carbon chain length, with little absorption above C30. With respect to the carbon chain lengths likely to be present in mineral oil, n-paraffins may be absorbed to a greater extent than iso- or cyclo-paraffins. The major classes of hydrocarbons are well absorbed into the gastrointestinal tract in various species. In many cases, the hydrophobic hydrocarbons are ingested in association with fats in the diet. Some hydrocarbons may appear unchanged as in the lipoprotein



	<p>particles in the gut lymph, but most hydrocarbons partly separate from fats and undergo metabolism in the gut cell.</p> <p>Petroleum contains aromatic (benzene, toluene, ethyl benzene, naphthalene) and aliphatic hydrocarbons (n-hexane), which can result in many detrimental health effects, including, cancer, tumour formation, hearing loss, and nervous system toxicity.</p> <p>Animal testing shows breathing in petroleum causes tumours of the liver and kidney; these are however not considered to be relevant in humans. Similarly, exposure to gasoline over a lifetime can cause kidney cancer in animals, but the relevance in humans is questionable.</p> <p>Most studies involving gasoline have shown that gasoline does not cause genetic mutation, including all recent studies in living human subjects (such as in petrol service station attendants).</p> <p>Animal studies show concentrations of toluene (&gt;0.1%) can cause developmental effects such as lower birth weight and developmental toxicity to the nervous system of the foetus. Other studies show no adverse effects on the foetus.</p> <p>Prolonged contact with petroleum may result in skin inflammation and make the skin more sensitive to irritation and penetration by other materials.</p>
Caltech FCP-LO Resin & 2-HYDROXYETHYL METHACRYLATE	<p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>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.</p>

<b>Acute Toxicity</b>	✘	<b>Carcinogenicity</b>	✔
<b>Skin Irritation/Corrosion</b>	✔	<b>Reproductivity</b>	✔
<b>Serious Eye Damage/Irritation</b>	✔	<b>STOT - Single Exposure</b>	✘
<b>Respiratory or Skin Sensitisation</b>	✔	<b>STOT - Repeated Exposure</b>	✔
<b>Mutagenicity</b>	✘	<b>Aspiration Hazard</b>	✘

**Legend:**

- ✘ - Data either not available or does not fill the criteria for classification.
- ✔ - Data available to make classification.

**11.2 Information on other hazards**

**11.2.1. Endocrine disrupting properties**

Many chemicals may mimic or interfere with the body's hormones, known as the endocrine system. Endocrine disruptors are chemicals that can interfere with endocrine (or hormonal) systems.

Endocrine disruptors interfere with the synthesis, secretion, transport, binding, action, or elimination of natural hormones in the body. Any system in the body controlled by hormones can be derailed by hormone disruptors. Specifically, endocrine disruptors may be associated with the development of learning disabilities, deformations of the body various cancers and sexual development problems.

Endocrine disrupting chemicals cause adverse effects in animals. But limited scientific information exists on potential health problems in humans. Because people are typically exposed to multiple endocrine disruptors at the same time, assessing public health effects is difficult.

**11.2.2. Other information**

See Section 11.1

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

**Toxicity to fish [mg/l]:**

**Hazardous ingredients:**

Caltech FCP-LO Resin				
End Point	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available



<b>2-hydroxyethyl methacrylate</b>				
End Point	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	345mg/l	2
EC50	48h	Crustacea	380mg/l	2
NOEC(ECx)	504h	Crustacea	24.1mg/l	2
LC50	96h	Fish	>100mg/l	2

<b>p-tert-Butylstyrene</b>				
End Point	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	0.5mg/l	2
EC50	48h	Crustacea	0.63mg/l	2
NOEC(ECx)	672h	Fish	0.03mg/l	2

<b>styrene</b>				
End Point	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	1.4mg/l	1
EC50	48h	Crustacea	4.7mg/l	1
NOEC(ECx)	96h	Algae or other aquatic plants	0.063mg/l	1
EC50	96h	Algae or other aquatic plants	0.72mg/l	1
LC50	96h	Fish	3.29-5.05mg/L	4

<b>TCPP</b>				
End Point	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	45mg/l	2
EC50	48h	Crustacea	63mg/l	2
NOEC(ECx)	96h	Algae or other aquatic plants	6mg/l	2
EC50	96h	Algae or other aquatic plants	47mg/l	2
LC50	96h	Fish	30mg/l	2
ErC50	72h	Algae or other aquatic plants	82mg/l	2

<b>naphtha petroleum, heavy, hydrotreated</b>				
End Point	Test Duration (hr)	Species	Value	Source
EC50	48h	Crustacea	>0.002mg/l	2
EC50	96h	Algae or other aquatic plants	64mg/l	2
EC50(ECx)	48h	Crustacea	>0.002mg/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

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 Aromatic Substances Series:

Environmental Fate: Large, molecularly complex polycyclic aromatic hydrocarbons, or PAHs, are persistent in the environment longer than smaller PAHs.

Atmospheric Fate: PAHs are 'semi-volatile substances' which can move between the atmosphere and the Earth's surface in repeated, temperature-driven cycles of deposition and volatilization. Terrestrial Fate: BTEX compounds have the potential to move through soil and contaminate ground water, and their vapors are highly flammable and explosive.

Ecotoxicity - Within an aromatic series, acute toxicity increases with increasing alkyl substitution on the aromatic nucleus.

For styrene:

Transport: Styrene is expected to volatilise from surface waters, and is also removed from waters by adsorption onto soils and sediments. Under certain conditions, styrene may leach through soil (particularly sandy soils) and enter ground water.

Transformation/Persistence: Air - In the atmosphere, styrene reacts with both hydroxyl radicals and ozone with estimated half-lives of 3.5 and 9 hours, respectively. The chemical is also degraded in the presence of NOX and natural sunlight.

Drinking Water Standards: hydrocarbon total: 10 ug/l (UK max.).

**DO NOT discharge into sewer or waterways.**



## 12.2 Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
2-hydroxyethyl methacrylate	LOW	LOW
p-tert-Butylstyrene	HIGH	HIGH
styrene	HIGH (Half-life = 210 days)	LOW (Half-life = 0.3 days)

## 12.3 Bioaccumulation potential

Ingredient	Bioaccumulation
2-hydroxyethyl methacrylate	LOW (BCF = 1.54)
p-tert-Butylstyrene	HIGH (LogKOW = 4.8)
styrene	LOW (BCF = 77)

## 12.4. Mobility in soil

Ingredient	Bioaccumulation
2-hydroxyethyl methacrylate	HIGH (Log KOC = 1.043)
p-tert-Butylstyrene	LOW (Log KOC = 3695)
styrene	LOW (Log KOC = 517.8)

## 12.5 Results of PBT and vPvB assessment

	P	B	T	PBT criteria fulfilled?	vP	vB	vPvB criteria fulfilled?
Caltech FCP-LO Resin	No data available	No data available	No data available	No	No data available	No data available	No
2-hydroxyethyl methacrylate	No data available	No data available	No data available	No	No data available	No data available	No
p-tert-Butylstyrene	✗	✗	✓	No	✗	✗	No
styrene	✓	✓	✓	No	✗	✗	No
TCPP	✓	✗	✗	No	✓	✗	No
naphtha petroleum, heavy, hydrotreated	No data available	No data available	No data available	No	No data available	No data available	No

## 12.6. Endocrine disrupting properties

The evidence linking adverse effects to endocrine disruptors is more compelling in the environment than it is in humans. Endocrine disruptors profoundly alter reproductive physiology of ecosystems and ultimately impact entire populations. Some endocrine-disrupting chemicals are slow to break-down in the environment. That characteristic makes them potentially hazardous over long periods of time. Some well established adverse effects of endocrine disruptors in various wildlife species include; eggshell-thinning, displayed of characteristics of the opposite sex and impaired reproductive development. Other adverse changes in wildlife species that have been suggested, but not proven include; reproductive abnormalities, immune dysfunction and skeletal deformities.

## 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

<b>Disposal Considerations:</b>	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.
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<b>Waste code:</b>	08 01 11* waste paint and varnish containing organic solvents or other hazardous substances.
<b>Special precautions:</b>	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. <b>DO NOT seal or stopper drums being decontaminated as CO2 gas is generated and may pressurise containers.</b>
<b>Further information available via:</b>	<a href="https://www.alumascroofing.com/downloads/disposal-guides/">https://www.alumascroofing.com/downloads/disposal-guides/</a> 

## 14. TRANSPORT INFORMATION

### Labels required:



Hazchem: ●3Z

### Land transport (ADR):

14.1 UN number	3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.3 Transport hazard class(es)	Class: 9 Subsidiary Hazard: N/A
14.4 Packing group	III
14.5 Environmental hazard	Environmentally hazardous
14.6 Special precautions for user	Hazard identification (Kemler): 90 Classification code: M6 Hazard label: 9 Special provisions: 274 335 375 601 Limited quantity: 5 L Transport Category: 3 Tunnel restriction code: Not Applicable

### Air transport (ICAO-IATA/DGR):

14.1 UN number	3082
14.2 UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
14.3 Transport hazard class(es)	ICAO/IATA class: 9 ICAO/IATA Subsidiary Hazard: N/A ERG code: 9L
14.4 Packing group	III
14.5 Environmental hazard	Environmentally hazardous
14.6 Special precautions for user	Special provisions: A97 A158 A197 A215 Cargo only packing instruction: 964 Cargo only maximum qty/pack: 450 L Passenger and cargo packing instruction: 964 Passenger and cargo maximum qty/pack: 450L Passenger and cargo limited qty packing instructions: Y964 Passenger and cargo limited maximum qty/pack: 30 kg G



**Sea transport (IMDG-Code/GGVSee):**

14.1 UN number	3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.3 Transport hazard class(es)	IMDG class: 9 IMDG Subsidiary Hazard: Not applicable
14.4 Packing group	III
14.5 Environmental hazard	Marine Pollutant
14.6 Special precautions for user	EMS number: F-A, S-F Special provisions: 274 335 969 Limited quantities: 5 L

**Inland waterways transport (ADN):**

14.1 UN number	3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.3 Transport hazard class(es)	Class: 9 Subsidiary Hazard: N/A
14.4 Packing group	III
14.5 Environmental hazard	Environmentally hazardous
14.6 Special precautions for user	Classification code: M6 Special provisions: 274; 335; 375; 601 Limited quantity: 5 L Equipment required: PP Fire cones numbers: 0

**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
2-hydroxyethyl methacrylate	Not Available
p-tert-Butylstyrene	Not Available
styrene	Not Available
TCP	Not Available
naphtha petroleum, heavy, hydrotreated	Not Available

**14.7.3. Transport in bulk in accordance with the IGC Code**

Product name	Ship Type
2-hydroxyethyl methacrylate	Not Available
p-tert-Butylstyrene	Not Available
styrene	Not Available
TCP	Not Available
naphtha petroleum, heavy, hydrotreated	Not Available

**15. REGULATORY INFORMATION**

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

**2-hydroxyethyl methacrylate is found on the following regulatory lists**

EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances

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



**p-tert-Butylstyrene 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)

**styrene is found on the following regulatory lists**

Chemical Footprint Project - Chemicals of High Concern List  
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  
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 2A: Probably carcinogenic to humans

**TCPP is found on the following regulatory lists**

EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances  
Europe European Customs Inventory of Chemical Substances- ECICS

**naphtha petroleum, heavy, hydrotreated is found on the following regulatory lists**

Chemical Footprint Project - Chemicals of High Concern List  
EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 2) Carcinogens: Category 1 B  
EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 4) Germ cell mutagens: Category 1 B  
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  
European Union Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work

**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: E2

**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
2-hydroxyethyl methacrylate	868-77-9	607-124-00-X	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Skin Corrosion/Irritation Category 2; Sensitisation (Skin) Category 1; Serious Eye Damage/Eye Irritation Category 2	GHS07; Wng	H315; H317; H319
2	Skin Corrosion/Irritation Category 2; Sensitisation (Skin) Category 1; Serious Eye Damage/Eye Irritation Category 2; Serious Eye Damage/Eye Irritation Category 2B; Hazardous to the Aquatic Environment Long-Term Hazard Category 4	GHS07; Wng	H315; H317; H319; H413
Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.			

Ingredient	CAS number	Index No	ECHA Dossier
p-tert-Butylstyrene	1746-23-2	Not Available	Not Available



Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Aspiration Hazard Category 1; Skin Corrosion/Irritation Category 2; Serious Eye Damage/Eye Irritation Category 2; Reproductive Toxicity Category 2; Hazardous to the Aquatic Environment Acute Hazard Category 1; Hazardous to the Aquatic Environment Long-Term Hazard Category 1	GHS08; GHS09; Dgr	H304; H315; H319; H361f; H400; H410
2	Skin Corrosion/Irritation Category 2; Serious Eye Damage/Eye Irritation Category 2; Acute Toxicity (Inhalation) Category 4; Hazardous to the Aquatic Environment Acute Hazard Category 1; Hazardous to the Aquatic Environment Long-Term Hazard Category 1; Aspiration Hazard Category 1; Reproductive Toxicity Category 2; Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3	GHS08; GHS09; Dgr	H315; H319; H332; H361f; H400; H410; H304; H335

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

Ingredient	CAS number	Index No	ECHA Dossier
styrene	100-42-5	601-026-00-0	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Flammable Liquids Category 3; Aspiration Hazard Category 1; Skin Corrosion/Irritation Category 2; Serious Eye Damage/Eye Irritation Category 2; Acute Toxicity (Inhalation) Category 4; Hazardous to the Aquatic Environment Long-Term Hazard Category 3	GHS02; GHS08; Dgr	H226; H304; H315; H319; H332; H335; H372; H412
2	Flammable Liquids Category 3; Aspiration Hazard Category 1; Skin Corrosion/Irritation Category 2; Serious Eye Damage/Eye Irritation Category 2; Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3; Specific Target Organ Toxicity - Repeated Exposure Category 1; Hazardous to the Aquatic Environment Long-Term Hazard Category 3; Carcinogenicity Category 2; Acute Toxicity (Oral) Category 3; Germ Cell Mutagenicity Category 2; Reproductive Toxicity Category 1B; Specific Target Organ Toxicity - Single Exposure Category 1	GHS08; GHS02; Dgr; GHS06; GHS04	H226; H304; H315; H319; H335; H372; H412; H351; H302; H331; H341; H360; H370; H312

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

Ingredient	CAS number	Index No	ECHA Dossier
TCPP	1244733-77-4	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Acute Toxicity (Oral) Category 4; Hazardous to the Aquatic Environment Long-Term Hazard Category 3	GHS07; Wng	H302; H412
2	Acute Toxicity (Oral) Category 4; Hazardous to the Aquatic Environment Long-Term Hazard Category 3	GHS07; Wng	H302; H412

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

Ingredient	CAS number	Index No	ECHA Dossier
naphtha petroleum, heavy, hydrotreated	64742-48-9.	649-327-00-6	None

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Aspiration Hazard Category 1; Germ Cell Mutagenicity Category 1B; Carcinogenicity Category 1B	GHS08; Dgr	H304; H340; H350

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



**National Inventory Status**

National Inventory	Status
Australia - AIIIC / Australia Non-Industrial Use	No (p-tert-Butylstyrene; TCPP)
Canada - DSL	No (TCPP)
Canada - NDSL	No (2-hydroxyethyl methacrylate; p-tert-Butylstyrene; styrene; TCPP; naphtha petroleum, heavy, hydrotreated)
China - IECSC	No (p-tert-Butylstyrene; TCPP)
Europe - EINEC / ELINCS / NLP	No (TCPP)
Japan - ENCS	No (p-tert-Butylstyrene; TCPP)
Korea - KECI	No (p-tert-Butylstyrene; TCPP)
New Zealand - NZIoC	No (p-tert-Butylstyrene)
Philippines - PICCS	No (p-tert-Butylstyrene; TCPP)
USA - TSCA	TSCA Inventory 'Active' substance(s) (2-hydroxyethyl methacrylate; p-tert-Butylstyrene; styrene; naphtha petroleum, heavy, hydrotreated); No (TCPP)
Taiwan - TCSI	No (TCPP)
Mexico - INSQ	No (p-tert-Butylstyrene; TCPP)
Vietnam - NCI	Yes
Russia - FBEPH	No (p-tert-Butylstyrene; TCPP)
UAE - Control List (Banned/RestrictedSubstances)	No (2-hydroxyethyl methacrylate; p-tert-Butylstyrene; styrene; TCPP; naphtha petroleum, heavy, hydrotreated)
Legend:	Yes = All CAS declared ingredients are on the inventory. No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets).

**16. OTHER INFORMATION**

**SDS version summary:**

Version	Date of Update	Section Updated
1.0	13/04/2026	Template Change

- H226: Flammable liquid and vapour.
- H302: Harmful if swallowed.
- H304: May be fatal if swallowed and enters airways.
- H312: Harmful in contact with skin.
- H331: Toxic if inhaled.
- H332: Harmful if inhaled.
- H335: May cause respiratory irritation.
- H336: May cause drowsiness or dizziness.
- H340: May cause genetic defects.
- H341: Suspected of causing genetic defects.
- H350: May cause cancer.
- H360: May damage fertility or the unborn child.
- H361d: Suspected of damaging the unborn child.
- H361f: Suspected of damaging fertility.
- H370: Causes damage to organs.
- H372: Causes damage to organs through prolonged or repeated exposure.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.
- H412: Harmful to aquatic life with long lasting effects.
- H413: May cause long lasting harmful effects to aquatic life.

**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. 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
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code
  
- AIIIC: 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
Skin Corrosion/Irritation Category 2, H315	Calculation method
Sensitisation (Skin) Category 1, H317	Calculation method
Serious Eye Damage/Eye Irritation Category 2, H319	Calculation method
Carcinogenicity Category 2, H351	Calculation method
Reproductive Toxicity Category 2, H361	Expert judgement
Specific Target Organ Toxicity - Repeated Exposure Category 2, H373	Calculation method
Hazardous to the Aquatic Environment Long-Term Hazard Category 2, H411	Calculation method



**CALTECH FCP-LO RESIN**  
SAFETY DATA SHEET

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The contents and format of this Safety Data Sheet comply with UK REACH (UK Regulation (EC) No 1907/2006 as amended) and UK CLP Regulation (UK Regulation (EC) No 1272/2008 as amended), including the requirements of Annex II of UK REACH

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