

## Material Safety Data Sheet (MSDS) – TriRoof MultiFlex Polyester Primer

Conforms to regulation (EC) 1907/2006 (REACH), annex II as amended by Regulation (EU) 453/2010

### 1. Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1. Product Identifier

Trade Name            TriRoof MultiFlex Polyester Primer

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

Industrial uses: Primer for use with polyester and other resins  
Professional uses: Primer for use with polyester and other resins  
Uses advised against: Product is not for consumer use

#### 1.3. Details of the supplier of the safety data sheet

Tricel Composites (NI) Ltd  
10 & 11 Milltown Industrial  
Estate  
Greenan Road  
Warrenpoint  
Newry  
BT34 3FN  
Tel: +44 (0) 2841 753 738  
Email: info@tricelcomposites.co.uk

#### 1.4. Emergency telephone number

+44 (0) 2841 753 738

### 2. Hazards Identification

#### 2.1. Classification of the substance or mixture

Product definition: Mixture

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

Flam. Liq. 3, H226  
Acute Tox. 4, H332  
Skin Irrit. 2, H315  
Skin sens 1, H 317  
Eye Irrit. 2, H319  
Repr. 2, H361d (Unborn child)  
STOT SE 3, H335 (Respiratory tract irritation)  
STOT RE 1, H372 (Ears)  
Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended

## 2.2. Label elements

Hazard pictograms:



Signal word: DANGER

### Hazard Statements

H225 –Highly Flammable liquid and vapour.

H317- May cause an allergic skin reaction

H332 - Harmful if inhaled.

H319 - Causes serious eye irritation.

H315 - Causes skin irritation.

H361d - Suspected of damaging the unborn child.

H335 - May cause respiratory irritation.

H372 - Causes damage to organs (ears) through prolonged or repeated exposure.

H412 - Harmful to aquatic life with long lasting effects.

### Supplementary label:

EUH 208: Contains Cobalt bis(2-ethylhexanoate). May produce an allergic reaction

### Precautionary Statements

#### Prevention:

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P280 - Wear protective gloves: 4 - 8 hours (breakthrough time): fluor rubber (Viton) (0.70 mm); < 1 hour (breakthrough time): Nitril rubber (0.4 mm). Wear eye or face protection. Wear protective clothing.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.

P242 - Use only non-sparking tools.

P243 - Take precautionary measures against static discharge.

P233 - Keep container tightly closed.

P271 - Use only outdoors or in a well-ventilated area.

P273 - Avoid release to the environment.

P260 - Do not breathe vapour.

P270 - Do not eat, drink or smoke when using this product

P261 - Avoid breathing vapour

P272 - Contaminated work clothing should not be allowed out of the workplace.

P264 - Wash hands thoroughly after handling

Response:

P314 - Get medical attention if you feel unwell.

P308 + P313 - IF exposed or concerned: Get medical attention.

P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.

P332 + P313 - If skin irritation occurs: Get medical attention.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention

P333 + P313 - If skin irritation or rash occurs: Get medical attention.

Supplement Statements

EUH 208: Contains Cobalt bis (2-ethylhexanoate). May produce an allergic reaction

Storage:

P235 - Keep cool

Disposal:

P501 - Dispose of contents and container in accordance with all local, regional, national and International regulations.

### 3. Composition and Information on Ingredients

Ingredient Name	Concentration %	Regulation (EC) No. 1272/2008 [CLP]
Styrene CAS: 100-42-5 EC Number 202-851-5 REACH number 01-2119457861-32-xxxx	5-15%	Flamm Liq 3 H226 Acute Tox 4. H332 Eye Irrit 2. H319 Skin Irrit 2. H315 Resp 2 H361d (unborn child) STOT SE 3 H335 – (Respiratory Tract Irritation) STOT RE 1 H372 (ears) (inhalation) Asp. Tox 1.H 304 Aquatic Chronic 3.H 412
Methyl Methacrylate EC: 201-297-1 CAS: 80-62-6 Index: 607-035-00-6	15-25%	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335 (Respiratory Tract Irritation)
2-hydroxy ethyl methacrylate REACH #: 01-2119490169-29 EC: 212-782-2 CAS: 868-77-9 Index: 607-124-00-X	2.5-10%	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
2-ethylhexanoic acid, cobalt salt CAS : 13586-82-8 EC Number 205-250-6 REACH number 01-2119524678-29-xxxx	<1%	Repr 2.H 361f (fertility) Skin sens 1.H 317

Refer to Section 16 for additional wording.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

## 4. First Aid Measures

### 4.1. Description of first aid measures

#### General

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.

#### Eye Contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

#### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband

#### Skin Contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse

#### Ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Loosen tight clothing such as a collar, tie, belt or waistband

#### Protection of First Aiders

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

#### 4.2. Most Important symptoms and effects, both acute and delayed

##### Potential acute health effects

Eye contact: Causes serious eye irritation

Inhalation: Harmful if inhaled. May cause respiratory irritation

Skin contact: Causes skin irritation

Ingestion: Irritating to mouth, throat and stomach.

##### Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

Inhalation: Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
headache  
nausea  
dizziness

Skin contact: Adverse symptoms may include the following:  
reduced foetal weight  
irritation  
redness

Ingestion: Adverse symptoms may include the following:  
stomachache  
vomiting

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

##### Notes to Physician:

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

Specific Treatments: No specific treatment

## 5. Fire Fighting Measures

### 5.1. Extinguishing media

Suitable extinguishing agents

Recommended: alcohol-resistant foam, CO<sub>2</sub>, powders, water spray.

For safety reasons unsuitable extinguishing agents

Do not use water jet.

### 5.2. Special hazards arising from the substance or mixture

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, Chlorine compounds

### 5.3. Advice for firefighters

Protective equipment:

Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Appropriate breathing apparatus may be required.

## 6. Accidental Release Measures

### 6.1. Personal Precautions protective equipment and emergency procedures

Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist.

Refer to protective measures listed in sections 7 and 8. If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

### 6.2. Environmental precautions:

Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

### 6.3. Methods and material for containment and cleaning up:

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.

### 6.4. Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

## 7. Handling and Storage

### 7.1. Precautions for Safe Handling

Protective Measures & Advice on General Occupational hygiene

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

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

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

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

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

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

Comply with the health and safety at work laws.

Do not allow to enter drains or watercourses.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

### 7.2. Conditions for safe storage, including incompatibilities

Store in accordance with local regulations.

Notes on joint storage

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

Additional information on storage conditions

Observe label precautions. Store in a dry, cool, and well-ventilated area. Keep away from heat and direct sunlight.

Keep container tightly closed.

Keep away from sources of ignition. No smoking. Prevent unauthorised access.

Containers that have been opened must be carefully resealed and kept upright to prevent Leakage

### 7.3. Specific end use(s)

Not Available



## 8. Exposure Controls / Personal Protection

### 8.1. Control parameters

Product/ingredient name	Exposure limit values
Styrene	EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 1080 mg/m <sup>3</sup> 15 minutes. STEL: 250 ppm 15 minutes. TWA: 430 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.
Methyl Methacrylate	EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 416 mg/m <sup>3</sup> 15 minutes. STEL: 100 ppm 15 minutes. TWA: 208 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.
2-ethylhexanoic acid, cobalt salt	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 0.01 mg/m <sup>3</sup> 8 hours.

#### Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Reference should be made to monitoring standards, such as the following: European Standard.

EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard.

EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482.

(Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Styrene	DNEL	Short Term Inhalation	289 mg/m <sup>3</sup> (67ppm)	Workers	Systemic
	DNEL	Short Term Inhalation	306 mg/m <sup>3</sup> (71ppm)	Workers	Local
	DNEL	Long Term Inhalation	85 mg/m <sup>3</sup> (20ppm)	Workers	Systemic
	DNEL	Short Term Inhalation	174.25 mg/m <sup>3</sup> (41ppm)	Consumers	Systemic
	DNEL	Short Term Inhalation	182.75 mg/m <sup>3</sup> (43ppm)	Consumers	Local
	DNEL	Long Term Inhalation	10.2 mg/m <sup>3</sup> (2.4ppm)	Consumers	Systemic
	DNEL	Long Term Dermal	406 mg/kg bw/day	Workers	Systemic
	DNEL	Long Term	343 mg/kg	Consumers	Systemic
	DNEL	dermal Long Term Oral	bw/day 2.1 mg/kg bw/day	Consumers	Systemic
Methyl Methacrylate	DNEL	Long Term Inhalation	208 mg/m <sup>3</sup> (50ppm)	Workers	Systemic
	DNEL	Long Term Inhalation	208 mg/m <sup>3</sup> (50ppm)	Workers	Local
	DNEL	Long Term Dermal	13.67 mg/kg bw/day	Workers	Systemic
	DNEL	Long Term Dermal	1.5 mg/cm <sup>3</sup>	Workers	Local
	DNEL	Short Term Dermal	1.5 mg/cm <sup>3</sup>	Workers	Local
	DNEL	Long Term Inhalation	74.3 mg/m <sup>3</sup> (17.9ppm)	Consumers	Systemic
	DNEL	Long Term Inhalation	104 mg/kg bw/day	Consumers	Local
	DNEL	Long Term Dermal	8.2 mg/kg bw/day	Consumers	Systemic
	DNEL	Long Term Dermal	1.5 mg/cm <sup>3</sup>	Consumers	Local
	DNEL	Short Term Dermal	1.5 mg/cm <sup>3</sup>	Consumers	Local
		DNEL	Long Term Inhalation	4.9 mg/m <sup>3</sup>	Workers
2-hydroxyethyl methacrylate	DNEL	Long Term Dermal	1.3 mg/kg bw/day	Workers	Systemic
	DNEL	Long Term Inhalation	2.9 mg/m <sup>3</sup>	Consumers	Systemic
	DNEL	Long Term Dermal	0.83mg/kg bw/day	Consumers	Systemic
	DNEL	Long Term Oral	0.83mg/kg bw/day	Consumers	Systemic
	DNEL	Long Term Oral	0.83mg/kg bw/day	Consumers	Systemic
2-ethylhexanoic acid, cobalt salt	DNEL	Long Term Inhalation	0.2351 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long Term Inhalation	0.037 mg/m <sup>3</sup>	Consumers	Local
	DNEL	Long Term Oral	0.0558 mg/kg bw/day	Consumers	Systemic

## PNECs

Product/ingredient name	Compartment Detail	Value	Method detail
Styrene	Fresh water	0.028 mg/l	Assessment Factors
	Marine Water	0.014 mg/l	Assessment Factors
	Fresh Water Sediment	0.614 mg/kg dwt	-
	Marine Water Sediment	0.307 mg/l	-
	Sewerage Treatment Plant	5 mg/l	Assessment Factors
	Soil	0.2 mg/kg dwt	-
	Intermittent releases	0.04 mg/l	Assessment Factors
Methyl Methacrylate	Fresh Water	0.94 mg/l	Assessment Factors
	Marine Water	0.94 mg/l	Assessment Factors
	Intermittent releases	0.94 mg/l	Assessment Factors
	Sewerage Treatment Plant	10 mg/l	Assessment Factors
	Fresh Water Sediment	5.74 mg/kg dwt	Equilibrium Partitioning
	Soil	1.47 mg/kg dwt	Equilibrium Partitioning
2-hydroxyethyl methacrylate	Fresh Water	0.482 mg/l	
	Marine Water	0.482 mg/l	
	Intermittent releases	1 mg/l	
	Sewerage Treatment Plant	10 mg/l	
	Fresh Water Sediment	3.79 mg/kg/dwt	
	Marine water Sediment	3.79 mg/kg/dwt	
	Soil	0.48 mg/kg/dwt	
2-ethylhexanoic acid, cobalt salt	Fresh Water	0.51 µl	-
	Marine Water	2.36 µl	-
	Sewerage Treatment Plant	0.37 mg/l	-
	Fresh Water Sediment	9.5 mg/kg	-
	Marine Water Sediment	9.5 mg/kg	-
	Soil	7.9 mg/kg	-

## 8.2. Exposure controls

### Appropriate engineering controls

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

### Personal protective equipment

#### General protective and hygienic measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

### Breathing equipment:

If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour (Type A) and particulate filter (EN 140).

#### Protection of hands

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

#### Material of gloves

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. 4 - 8

hours (breakthrough time): fluor rubber (Viton) (0.70 mm)

< 1 hour (breakthrough time): Chloroprene , neoprene rubber (0.4 mm)

#### Eye protection

Safety glasses with side shields. (EN166).

#### Body Protection

Wear overalls or long sleeved shirt. (EN 467).

## 9. Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties

#### General Information:

##### Appearance:

Form: Liquid

Colour: White

Odour: Pungent

Odour threshold: Not Available

pH-value: Not Available

##### Change in condition

Melting point/Melting range: Not Available

Initial Boiling point/Boiling range: Not Available

Flash point: 21.5°C

Evaporation Rate: Not Available

Flammability (solid, gaseous) Combustible when exposed to heat or flames

##### Critical values for explosion:

Lower: Not Available

Upper: Not Available

Vapour pressure at 20°C: Not Available

Vapour density: Not Available

Relative Density: 1.14 g/cm<sup>3</sup> (20°C)

Solubility in / Miscibility with Water: Insoluble in water

Partition coefficient (n-octanol/water): Not Available

Auto Ignition temperature: Not Available

Decomposition Temperature: Not Available

Viscosity: 1000cps (Brookfield RV spindle 4/speed 60)

Explosive Properties: Product is not explosive. However, formation of explosive air/vapour mixtures is possible

Oxidising Properties: Not Available

## 9.2. Other information

No Additional Information

## 10. Stability and Reactivity

### 10.1. Reactivity

No specific test data related to reactivity available for this product or its ingredients.

### 10.2. Chemical stability

Conditions to be avoided:

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

### 10.3. Possibility of hazardous reactions

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

### 10.4. Conditions to avoid

When exposed to high temperatures may produce hazardous decomposition products.

### 10.5. Incompatible materials:

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

### 10.6. Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO<sub>2</sub>, and smoke can be generated.

## 11. Toxicological Data

### 11.1. Information on toxicological effects

There is no data available on the mixture itself.

Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage.

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

Acute Toxicity

Product/ingredient Name	Result	Species	Dose	Exposure
Styrene	LC50 Inhalation	Rat	10 -20 mg/Kg	4 hours
	Vapour	Rat	>5000 mg/Kg	-
	LD50 Oral	Rat – Male,	>2000 mg/Kg	-
	LDLo Dermal	Female		
Methyl Methacrylate	LC50 Inhalation	Rat	78000 mg/m3	4 hours
	Vapour	Rabbit	5000 mg/Kg	
	LD 50 Dermal	Rat	7872 mg/Kg	
	LD50 Oral			
2-hydroxy ethyl methacrylate	LD 50 Dermal	Rabbit	>3000mg/kg	
	LD50 Oral	Rat	5050 mg/kg	
2-ethylhexanoic acid, cobalt salt	LD50 Oral	Rat - Female	3129 mg/Kg	

Conclusion/Summary: Based on available data, the classification criteria are not met

Irritation/Corrosion

Product/ingredient Name	Result	Species	Score	Exposure	Observation
Methyl Methacrylate	Skin –Oedema	Rabbit	0	24 hours 0.5 ml	72 hours
	Skin -Erythema/Eschar	Rabbit	0	24 hours 0.5 ml	72 hours
	Eyes – Cornea Opacity	Rabbit	0	24 hours 0.1 ml	7 days
	Eyes - Oedema of the conjunctivae	Rabbit	0	24 hours 0.1 ml	7 days
2-hydroxy ethyl methacrylate	Skin - Primary dermal irritation index (PDII)	Rabbit	0.167	-	-
	Eyes - Cornea Opacity	Rabbit	-	-	7 days
	Eyes - Iris lesion	Rabbit	-	-	7 days
	Eyes - Redness of the conjunctivae	Rabbit	-	-	7 days
	Eyes - Oedema of the conjunctivae	Rabbit	-	-	7 days
2-ethylhexanoic acid, cobalt salt	Eyes – Irritant	Rabbit	-	-	-

Conclusion/Summary  
 Skin: Irritating To eyes  
 Eyes: Irritating to skin  
 Respiratory: Not Available

Sensitisation

Product/ingredient Name	Route of Exposure	Species	Result
Methyl Methacrylate	Skin	Mouse	Sensitising
2-hydroxy ethyl methacrylate	Skin	Guinea Pig	Not Sensitising
	Skin	Guinea Pig	Sensitising
	Skin	Mouse	Sensitising

Conclusion/Summary  
 Skin: Sensitising  
 Respiratory: Based on available data, the classification criteria are not met.

Mutagenicity

Product/ingredient Name	Test	Experiment	Result
2-ethylhexyl methacrylate	OECD 473 In vitro Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject – Mammalian Human	Negative
2-hydroxy ethyl methacrylate		Experiment: In vitro Subject: Mammalian-Animal	Positive
		Experiment: In vitro Subject: Mammalian-Human	Positive
		Experiment: In vitro Subject: Bacteria	Negative
		Experiment: In vitro Subject: Mammalian-Animal	Negative
		Experiment: In vivo Subject: Insect	Negative

Conclusion/Summary: Based on available data, the classification criteria are not met.

Carcinogenicity

Product/ingredient Name	Result	Species	Dose	Exposure
2-hydroxy ethyl methacrylate	Negative - Inhalation - NOAEC	Rat	-	-
	Negative - Inhalation - NOAEC	Mouse	-	-
	Negative - Oral -NOAEL	Rat	-	-

Conclusion/Summary: Not Available

Reproductive toxicity

Product/ingredient Name	Maternal toxicity	Fertility	Development Toxin	Species	Dose	Exposure
2-hydroxy ethyl methacrylate			-	Rat	Oral >=1000 mg/kg/day Parental	-
			-	Rat	Oral >=50 mg/kg/day Parental F1	
			-	Rat	Oral >=400 mg/kg/day Parental F1	

Conclusion/Summary: Not Available

Teratogenicity

Conclusion/Summary: Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Product/ingredient Name	Category	Route of exposure	Target Organs
Styrene	Category 3	Not Applicable	Respiratory tract irritation
Methyl Methacrylate	Category 3	Not Applicable	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient Name	Category	Route of exposure	Target Organs
Styrene	Category 1	Not Applicable	ears

Aspiration Hazard

Product/ingredient Name	Result
Styrene	Aspiration Hazard – Category 1



## 12. Ecological Data

### 12.1. Toxicity

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

Product/ingredient Name	Result	Species	Exposure
Styrene	Acute EC50 4.9mg/l Fresh Water	Algae	72 hours
	Acute EC50 4.7mg/l Fresh Water	Daphnia	48 hours
	Acute LC50 10 mg/l Fresh Water	Fish	96 hours
	Chronic NOEC 1.01 mg/l Fresh Water	Daphnia	21 Days
2-ethylhexanoic acid, cobalt salt	EC50 0.144 mg/l Fresh Water	Algae	72 hours (Growth rate)
	EC50 71.314 mg/l Marine Water	Algae	96 hours (growth rate)
	NOEC 0.0201 mg/l Fresh water	Daphnia	7 days (reproduction)
	NOEC 0.0864 mg/l Fresh water	Daphnia	7 days (mortality)
	Chronic EC10 0.023 mg /l Fresh Water	Algae	72 hours (growth rate)
	Chronic EC10 0.019 mg /l Fresh Water	Daphnia	7 days (reproduction)
	Chronic EC10 2.03mg /l Fresh Water	Fish	33 days
	Chronic EC10 5.8 mg /l Fresh Water	Fish	33 days
	Chronic EC10 1.09 mg /l Fresh Water	Fish	33 days
	Chronic NOEC 0.0322 mg /l Fresh Water	Algae	72 hours (growth rate)
	Chronic NOEC 1.02 mg /l Fresh Water	Fish	33 days
	Chronic NOEC 2.14 mg /l Fresh Water	Fish	33 days

Methyl Methacrylate	Acute EC50 >110 mg/l Fresh Water Acute EC50 69 mg/l Fresh Water Acute LC50 130000 µg/l Fresh water Acute NOEC 49 mg/l Fresh water Chronic NOEC 37 mg/l Fresh water Chronic NOEC 9.4 mg/l Fresh water	Algae - Pseudokirchnerella subcapitata Daphnia - Daphnia magna  Fish - Pimephales promelas- Adult  Algae - Pseudokirchnerella Subcapitata Daphnia - Daphnia magna  Fish - Danio rerio	72 hours (biomass) 48 hours mobility 96 hours mortality 72 hours (biomass) 21 days Reproduction 35 Days
2-hydroxy ethyl methacrylate	EC50 345 mg/l EC50 210 mg/l EC50 380 mg/l LC50 227 mg/l NOEC 160 mg/l NOEC 25 mg/l Chronic NOEC 24.1 mg/l	Algae – Selenastrum capricornutum Crustaceans Daphnia Fish Algae – Selenastrum capricornutum Fish- Oryzias latipes Daphnia	72 hours 48 hours 48 hours 96 hours 72 hours 14 days 21 days

Conclusion/Summary: Based on available data, the classification criteria are not met.

## 12.2. Persistence and degradability

Product/ingredient Name	Test	Result	Dose	Inoculum
Styrene	-	73.2% - 28 days	-	-
2-hydroxy ethyl methacrylate	OECD 301C Ready Biodegradability Modified OECD Screening Test OECD 301C Ready Biodegradability Modified MITI Test (I) OECD 301D	98 % - Readily – 28 Days  92 to 100% readily -14 Days  94 % - Readily – 28 Days		

Conclusion/Summary: Based on available data, the classification criteria are not met.

Product/ingredient Name	Aquatic half-life	Photolysis	Biodegradability
Styrene	-	-	Readily
Methyl Methacrylate	-	-	Readily
2-hydroxy ethyl methacrylate	-	-	Readily
2-ethylhexanoic acid, cobalt salt	-	-	Readily

### 12.3. Bioaccumulative potential

Product/ingredient Name	LogPow	BCF	Potential
Styrene	3	13.49	Low
Methyl Methacrylate	1.38	2	Low
2-hydroxy ethyl methacrylate	0.47	1.34 to 1.54	Low
2-ethylhexanoic acid, cobalt salt	-	156	Low

12.4. Mobility in soil Not Available

12.5. Results of PBT and VPvB assessment Not Available

12.6. Other adverse effects; No known significant effects or critical hazards.

## 13. Disposal Considerations

### 13.1. Waste treatment methods

**Recommendation**

The generation of waste should be avoided or minimised wherever possible.

Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous Waste**

Yes

**Disposal considerations**

Do not allow to enter drains or watercourses.

Dispose of according to all federal, state and local applicable regulations.




If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

For further information, contact your local waste authority.

**European Waste catalogue (EWC)**

08 01 11\* Waste paint and varnish containing organic solvents or other dangerous substances.

## 14. Transport Information

	ADR/RID (Note 14.8)	IMDG (Note 14.9)	IATA
14.1 UN Number	UN 1263	UN 1263	UN 1263
14.2 Proper Shipping Name	Paint Related Product	Paint Related Product	Paint Related Product
14.3 Transport Class(es)	3 Flammable liquids. 	3 Flammable liquids. 	3 Flammable liquids. 
14.4 Packing Group	III	III	III
14.5 Environmental Hazards	-	-	-
14.6 Tunnel restriction Code	D/E	D/E	D/E

Marine pollutant: No

**14.1. Special precautions for user Warning: Flammable liquids.**

Kemler Number: 30

**14.2. Due to its relatively high viscosity this normally Packing Group II classified product has been re-assigned as Packing Group III in accordance with ADR section 2.2.3.1.4**

**14.3. Due to its relatively high viscosity this normally Packing Group II classified product has been re-assigned as Packing Group III in accordance with section 2.3.2.3 of the IMDG Code providing it is in receptacles of no greater than 30 litres.**

Special Precautions for user:

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## 15. Regulatory Information

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

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

CN Code: 3208 90 91

EU regulation (EC) 1907/2006 (REACH)

Annex XIV – List of substances subject to authorization

Annex XIV

None of the components are listed

Substances of very high concern

None of the components are listed

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

Not applicable

Other EU Regulations

VOC for Ready-for-use mixture

Not Applicable

Europe inventory:

All components are listed or exempted.

National regulations

### 15.2. Chemical Safety Assessment

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

## 16. Other Information

Indicates information that has changed from previously issued version.

### Abbreviations and acronyms

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to regulation (EC) 1271/208 [CLP/GHS]

Classification	Justification
Flamm Liq 2 H225	On basis of test data
Acute Tox 4. H332	Calculation Method
Eye Irrit 2. H319	Calculation Method
Skin Irrit 2. H315	Calculation Method
Skin Sens 1 H 317	Calculation Method
Resp 2 H361d (unborn child)	Calculation Method
STOT SE 3 H335 – (Respiratory Tract Irritation)	Calculation Method
STOT RE 1 H372 (ears) (inhalation)	Calculation Method
Asp. Tox 1.H 304	Calculation Method
Aquatic Chronic 3.H 412	Calculation Method

### Full text of abbreviated H Statements

- H225 - Highly Flammable liquid and vapour
- H226 - Flammable liquid and vapour.
- H361d - Suspected of damaging the unborn child.
- H332 - Harmful if inhaled.
- H372 - Causes damage to organs through prolonged or repeated exposure if inhaled. (ears)
- H317- May cause an allergic skin reaction
- H319 - Causes serious eye irritation.
- H315 - Causes skin irritation
- H302 – Harmful if swallowed
- H 361f- Suspected to impair fertility
- H 317 – May cause an allergic skin reaction
- H412 - Harmful to aquatic life with long lasting effects
- H304 - May be fatal if swallowed and enters airways.
- H335 - May cause respiratory irritation.
- H400 – Very toxic to aquatic Life
- H412 – Harmful to aquatic life with long lasting effects

Full text of Classifications [CLP/GHS]

Flam. Liq. 2, H225	Flammable Liquids Category 2
Asp Tox 1. H 304	Aspiration Hazard – Category 1
Acute Tox. 4, H332	Long Term Aquatic Hazard – Category 3
Skin Sens, 1 H 317	Skin sensitization – Category 1
Skin Irrit. 2, H315	Skin Corrosion / Irritation – Category 2
Eye Irrit. 2, H319	Serious Eye damage / Eye Irritation – Category 2
Repr. 2, H361d (Unborn child)	Toxic for Reproduction (unborn child) – Category 2
STOT RE 1, H372	Specific Target Organ Toxicity (Repeated Exposure) - Category 1 (ears) (inhalation)
Aquatic Chronic 3, H412	Long Term Aquatic Hazard – Category 3
STOT SE 3, H335	Specific Target Organ Toxicity (Single Exposure) [Respiratory tract irritation] - Category 3

*Note*

*The information contained in the Safety Data Sheet is based on our data available on the date of publication. The information is intended to aid the user in controlling the handling risks; it is not to be construed as a warranty or specification of the product quality.*

*The information may not be or may not altogether be applicable to combinations of the product with other substances or to particular applications.*

*The user is responsible for ensuring that appropriate precautions are taken and for satisfying themselves that the data are suitable and sufficient for the product's intended purpose. In case of any unclarity we advise consulting the supplier or an expert.*

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