### Material Safety Data Sheet (MSDS) – TuffStuff Primer

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

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

## Product Identifier

Trade Name TuffStuff Primer – In conjunction with Flexible GRP

## 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

## Details of the supplier of the safety data sheet

Tuff Waterproofing Limited

Unit 5, First Avenue

Sherburn in Elmet

LS25 6PD

Tel: 01977 680250

Email: orders@tuffwaterproofing.co.uk

## Emergency telephone number

01977 680250

# Hazards Identification

## 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)

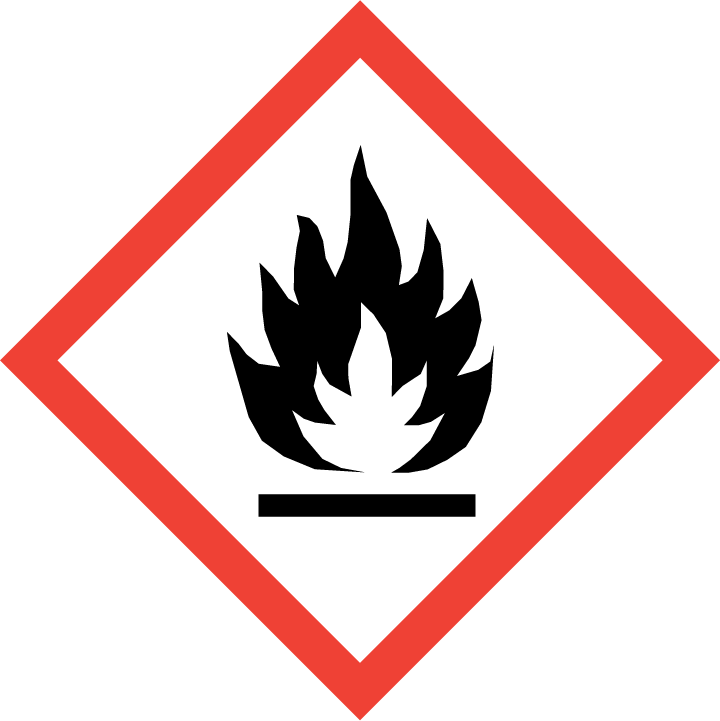
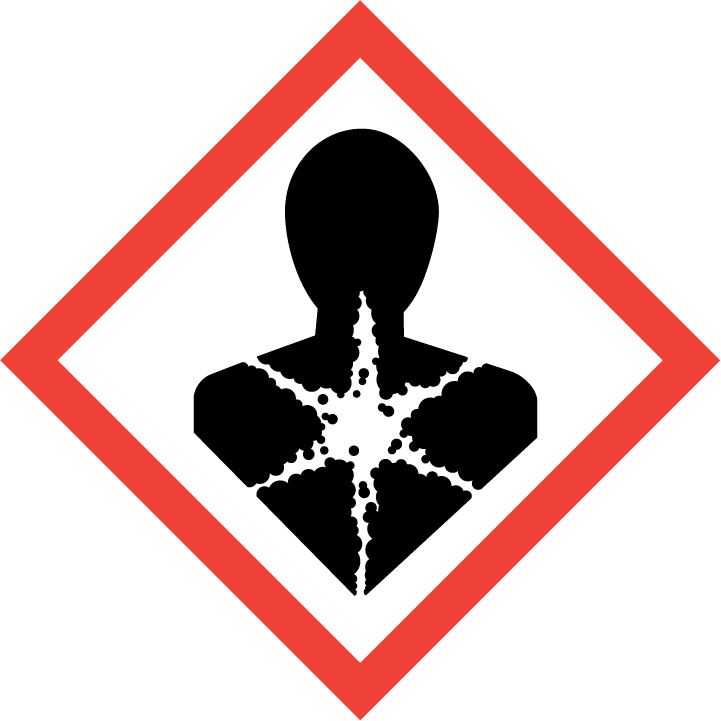
STOT RE 1, H372 (Ears)

Aquatic Chronic 3, H412

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

## 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.

# 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.

# First Aid Measures

## 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.

## 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

reduced foetal weight

**Skin contact:** Adverse symptoms may include the following:

irritation

redness

**Ingestion:** Adverse symptoms may include the following:

stomachache

vomiting

## 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

# Fire Fighting Measures

## Extinguishing media

**Suitable extinguishing agents**

Recommended: alcohol-resistant foam, CO₂, powders, water spray.

For safety reasons unsuitable extinguishing agents

Do not use water jet.

## 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

## 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.

# Accidental Release Measures

## 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.

## 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.

## 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.

## 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.

# Handling and Storage

## 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.

## 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

## Specific end use(s)

Not Available

# Exposure Controls / Personal Protection

## Control parameters

|  |  |
| --- | --- |
| **Product/ingredient name** | **Exposure limit values** |
| Styrene | EH40/2005 WELs (United Kingdom (UK), 12/2011).  STEL: 1080 mg/m³ 15 minutes.  STEL: 250 ppm 15 minutes.  TWA: 430 mg/m³ 8 hours.  TWA: 100 ppm 8 hours. |
| Methyl Methacrylate | EH40/2005 WELs (United Kingdom (UK), 12/2011).  STEL: 416 mg/m³ 15 minutes.  STEL: 100 ppm 15 minutes.  TWA: 208 mg/m³ 8 hours.  TWA: 50 ppm 8 hours. |
| 2-ethylhexanoic acid, cobalt salt | EH40/2005 WELs (United Kingdom (UK), 12/2011).  TWA: 0.01 mg/m³ 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  DNEL  DNEL  DNEL  DNEL  DNEL  DNEL  DNEL  DNEL | Short Term Inhalation  Short Term Inhalation  Long Term Inhalation  Short Term Inhalation  Short Term Inhalation  Long Term Inhalation  Long Term Dermal  Long Term dermal  Long Term Oral | 289 mg/m³  (67ppm)  306 mg/m³  (71ppm)  85 mg/m³  (20ppm)  174.25 mg/m³  (41ppm)  182.75 mg/m³  (43ppm)  10.2 mg/m³  (2.4ppm)  406 mg/kg  bw/day  343 mg/kg  bw/day  2.1 mg/kg  bw/day | Workers  Workers  Workers  Consumers  Consumers  Consumers  Workers  Consumers  Consumers | Systemic  Local  Systemic  Systemic  Local  Systemic  Systemic  Systemic  Systemic |
| Methyl Methacrylate | DNEL  DNEL  DNEL  DNEL  DNEL  DNEL  DNEL  DNEL  DNEL  DNEL | Long Term Inhalation  Long Term Inhalation  Long Term Dermal  Long Term Dermal  Short Term Dermal  Long Term Inhalation  Long Term Inhalation  Long Term Dermal  Long Term Dermal  Short Term Dermal | 208 mg/m³  (50ppm)  208 mg/m³  (50ppm)  13.67 mg/kg  bw/day  1.5 mg/cm³  1.5 mg/cm³  74.3 mg/m³  (17.9ppm)  104 mg/kg  bw/day  8.2 mg/kg  bw/day  1.5 mg/cm³  1.5 mg/cm³ | Workers  Workers  Workers  Workers  Workers  Consumers  Consumers  Consumers  Consumers  Consumers | Systemic  Local  Systemic  Local  Local  Systemic  Local  Systemic  Local  Local |
| 2-hydroxyethyl methacrylate | DNEL  DNEL  DNEL  DNEL  DNEL | Long Term Inhalation  Long Term Dermal  Long Term Inhalation  Long Term Dermal  Long Term Oral | 4.9 mg/m3  1.3 mg/kg  bw/day  2.9 mg/m3  0.83mg/kg  bw/day  0.83mg/kg bw/day | Workers  Workers  Consumers  Consumers  Consumers | Systemic  Systemic  Systemic  Systemic  Systemic |
| 2-ethylhexanoic acid, cobalt salt | DNEL  DNEL  DNEL | Long Term Inhalation  Long Term  Inhalation  Long Term Oral | 0.2351 mg/m³  0.037 mg/m³  0.0558 mg/kg  bw/day | Workers  Consumers  Consumers | Local  Local  Systemic |

**PNECs**

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

## 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).

# Physical and Chemical Properties

## 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/cm3 (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

## Other information

No Additional Information

# Stability and Reactivity

## Reactivity

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

## Chemical stability

Conditions to be avoided:

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

## Possibility of hazardous reactions

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

## Conditions to avoid

When exposed to high temperatures may produce hazardous decomposition products.

## Incompatible materials:

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

## Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO2, and smoke can be generated.

# Toxicological Data

## 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 Vapour  LD50 Oral  LDLo Dermal | Rat  Rat  Rat – Male, Female | 10 -20 mg/Kg  >5000 mg/Kg  >2000 mg/Kg | 4 hours  -  - |
| Methyl Methacrylate | LC50 Inhalation Vapour  LD 50 Dermal  LD50 Oral | Rat  Rabbit  Rat | 78000 mg/m3  5000 mg/Kg  7872 mg/Kg | 4 hours |
| 2-hydroxy ethyl methacrylate | LD 50 Dermal  LD50 Oral | Rabbit  Rat | >3000mg/kg  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  Skin -Erythema/Eschar  Eyes – Cornea Opacity  Eyes - Oedema of  the conjunctivae | Rabbit  Rabbit  Rabbit  Rabbit | 0  0  0  0 | 24 hours 0.5 ml  24 hours 0.5 ml  24 hours 0.1 ml  24 hours 0.1 ml | 72 hours  72 hours  7 days  7 days |
| 2-hydroxy ethyl methacrylate | Skin - Primary  dermal irritation  index (PDII)  Eyes - Cornea  Opacity  Eyes - Iris lesion  Eyes - Redness of  the conjunctivae  Eyes - Oedema of  the conjunctivae | Rabbit  Rabbit  Rabbit  Rabbit  Rabbit | 0.167  -  -  -  - | -  -  -  -  - | -  -  7 days  7 days  7 days  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  Skin  Skin | Guinea Pig  Guinea Pig  Mouse | Not Sensitising  Sensitising  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- | Positive |
| Animal  Experiment: In vitro | Positive |
| Subject: Mammalian-  Human |  |
| 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  Negative -  Inhalation - NOAEC  Negative - Oral -NOAEL | Rat  Mouse  Rat | -  -  - | -  -  - |

Conclusion/Summary: Not Available

**Reproductive toxicity**

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

# Ecological Data

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

## 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 t0 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 |

## 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 |

## Mobility in soil Not Available

## Results of PBT and VPvB assessment Not Available

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

# Disposal Considerations

## 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.

# 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.  FLAM-2$ | 3 Flammable liquids. FLAM-2$ | 3 Flammable liquids.  FLAM-2$ |
| 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

## Special precautions for user Warning: Flammable liquids.

**Kemler Number:** 30

## 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

## 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.

# Regulatory Information

## 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**

## Chemical Safety Assessment

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

# 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**  Flamm Liq 2 H225  Acute Tox 4. H332  Eye Irrit 2. H319  Skin Irrit 2. H315  Skin Sens 1 H 317  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 | **Justification**  On basis of test data  Calculation Method  Calculation Method  Calculation Method  Calculation Method  Calculation Method  Calculation Method  Calculation Method  Calculation Method  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 Category2

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 Irriation – 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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