

# SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

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## External Line Marker Silk Hardener

Revision 2  
Revision date 2015-06-03

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name	External Line Marker Silk Hardener
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#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Description	Restricted to professional users.  Component Of A Two Pack Polyurethane Floor Line Marker.
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#### 1.3. Details of the supplier of the safety data sheet

Company	Virtus Resins
Address	The Shippon, Faenol Pentrecelyn Ruthin LL15 2SP
Web	www.epoxyresinsuppliers.co.uk
Telephone	+44 (0)1978 790 744
Fax	
Email	info@epoxyresinsuppliers.co.uk
Email address of the competent person	info@ epoxyresinsuppliers.co.uk

#### 1.4. Emergency telephone number


Emergency telephone number	+44 (0)1978 790 744  8.30am to 5.00pm Mon - Fri
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### SECTION 2: Hazards identification

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

2.1.1. Classification - 1999/45/EC	Xn; R20 Xi; R37-43 R10 Symbols: Xn: Harmful.
Main hazards	Flammable. Harmful by inhalation. Irritating to respiratory system. May cause sensitisation by skin contact.
2.1.2. Classification - EC 1272/2008	Flam. Liq. 3: H226; Skin Irrit. 2: H315; Skin Sens. 1: H317; Acute Tox. 4: H332;

#### 2.2. Label elements

Hazard pictograms	
Signal Word	Warning
Hazard Statement	Flam. Liq. 3: H226 - Flammable liquid and vapour. Skin Irrit. 2: H315 - Causes skin irritation.

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## 2.2. Label elements

<b>Precautionary Statement: Prevention</b>	<p>Skin Sens. 1: H317 - May cause an allergic skin reaction. Acute Tox. 4: H332 - Harmful if inhaled.</p> <p>P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed. P240 - Ground/bond container and receiving equipment. P241 - Use explosion-proof electrical/ventilating/lighting// equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P264 - Wash thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P272 - Contaminated work clothing should not be allowed out of the workplace. P280 - Wear protective gloves/protective clothing/eye protection/face protection.</p>
<b>Precautionary Statement: Response</b>	<p>P302+P352 - IF ON SKIN: Wash with plenty of water/ . P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 - Call a POISON CENTER/doctor/ /if you feel unwell. P321 - Specific treatment (see on this label). P332+P313 - If skin irritation occurs: Get medical advice/attention. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P370+P378 - In case of fire: Use to extinguish.</p>
<b>Precautionary Statement: Storage</b>	P403+P235 - Store in a well-ventilated place. Keep cool.
<b>Precautionary Statement: Disposal</b>	P501 - Dispose of contents/container to

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

67/548/EEC / 1999/45/EC

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification	M-factor.
aliphatic polyisocyanate		28182-81-2			70 - 80%	Xn; R20 Xi; R37-43	
2-methoxy-1-methylethyl acetate (1-Methoxypropylacetate)	607-195-00-7	108-65-6	203-603-9		10 - 20%	R10	
Xylene (Xylene, o-,m-,p-or mixed isomers)	601-022-00-9	1330-20-7	215-535-7		1 - 10%	R10 Xn; R20/21 Xi; R38	
Ethylbenzene	601-023-00-4	100-41-4	202-849-4		1 - 10%	F; R11 Xn; R20	
Hexamethylene-di-isocyanate	615-011-00-1	822-06-0	212-485-8		0 - 0.5%	T; R23 Xi; R36/37/38 R42/43	

EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification	M-factor.
aliphatic polyisocyanate		28182-81-2				Skin Sens. 1: H317; Acute Tox. 4: H332;	
Xylene (Xylene, o-,m-,p-or mixed isomers)	601-022-00-9	1330-20-7	215-535-7			Flam. Liq. 3: H226; Acute Tox. 4: H332; Acute Tox. 4: H312; Skin Irrit. 2: H315;	
Ethylbenzene	601-023-00-4	100-41-4	202-849-4			Flam. Liq. 2: H225; Acute Tox. 4: H332;	
Hexamethylene-di-isocyanate	615-011-00-1	822-06-0	212-485-8			Acute Tox. 3: H331; Eye Irrit. 2: H319; STOT SE 3: H335; Skin Irrit. 2: H315; Resp. Sens. 1: H334; Skin Sens. 1: H317;	

## SECTION 4: First aid measures

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## 4.1. Description of first aid measures

Inhalation	Keep patient calm, remove to fresh air, seek medical attention.
Eye contact	Immediately wash affected eyes for at least 15 minutes under running water with eyelids help open, consult an eye specialist.
Skin contact	After contact with skin, wash immediately with plenty of water and soap.
Ingestion	DO NOT induce the patient to vomit, medical advice is required.

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

Inhalation	Seek medical attention if irritation or symptoms persist.
Eye contact	Seek medical attention if irritation or symptoms persist.
Skin contact	Seek medical attention if irritation or symptoms persist.
Ingestion	Seek medical attention if irritation or symptoms persist.

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

Inhalation	Seek medical attention.
Eye contact	Seek medical attention.
Skin contact	Seek medical attention.
Ingestion	Seek medical attention.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

	Carbon dioxide (CO <sub>2</sub> ). Foam.
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### 5.2. Special hazards arising from the substance or mixture

	Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen, isocyanate vapors and traces of hydrogen cyanide. In the event of fire and/or explosion do not breathe fumes.
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### 5.3. Advice for firefighters

	Special protective equipment. Wear self-contained breathing apparatus and chemical-protective clothing. Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.
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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

	Ensure adequate ventilation of the working area. Eliminate all sources of ignition. Wear suitable protective clothing.
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### 6.2. Environmental precautions

	Do not allow runoff water to enter sewers or drains. Do not let product contaminate subsoil.
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### 6.3. Methods and material for containment and cleaning up

	Remove mechanically; cover the remainder with wet, absorbent material (e.g sawdust, chemical binder based on calcium silicate hydrate, sand). After approx. one hour transfer to waste container and do not seal. (evolution of CO <sub>2</sub> !). Keep damp in a safe ventilated area for several days. For further disposal measures see chapter 13.
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### 6.4. Reference to other sections

	Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.
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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

	Ensure adequate ventilation of the working area.
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### 7.2. Conditions for safe storage, including any incompatibilities

	Keep container dry and tightly closed in a cool and well ventilated place.
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### 7.3. Specific end use(s)

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## 7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Are listed on the following items according to where it is going to be used.

#### 8.1.1. Exposure Limit Values

2-methoxy-1-methylethyl acetate (1-Methoxypropylacetate)	WEL 8-hr limit ppm: 50  WEL 15 min limit ppm: 100 WEL 8-hr limit mg/m3 total - inhalable dust: WEL 8-hr limit mg/m3 total - respirable dust:	WEL 8-hr limit mg/m3: 274  WEL 15 min limit mg/m3: 548 WEL 15 min limit mg/m3 total - inhalable dust: WEL 15 min limit mg/m3 total - respirable dust:
Ethylbenzene	WEL 8-hr limit ppm: 100 WEL 15 min limit ppm: 125 WEL 8-hr limit mg/m3 total - inhalable dust: WEL 8-hr limit mg/m3 total - respirable dust:	WEL 8-hr limit mg/m3: 441 WEL 15 min limit mg/m3: 552 WEL 15 min limit mg/m3 total - inhalable dust: WEL 15 min limit mg/m3 total - respirable dust:
Hexamethylene-di-isocyanate	WEL 8-hr limit ppm: WEL 15 min limit ppm: WEL 8-hr limit mg/m3 total - inhalable dust: WEL 8-hr limit mg/m3 total - respirable dust:	WEL 8-hr limit mg/m3: 0.02 WEL 15 min limit mg/m3: WEL 15 min limit mg/m3 total - inhalable dust: WEL 15 min limit mg/m3 total - respirable dust:
Xylene (Xylene, o-,m-,p-or mixed isomers)	WEL 8-hr limit ppm: 50  WEL 15 min limit ppm: 100 WEL 8-hr limit mg/m3 total - inhalable dust: WEL 8-hr limit mg/m3 total - respirable dust:	WEL 8-hr limit mg/m3: 220  WEL 15 min limit mg/m3: 441 WEL 15 min limit mg/m3 total - inhalable dust: WEL 15 min limit mg/m3 total - respirable dust:

### 8.2. Exposure controls



#### 8.2.1. Appropriate engineering controls

Ensure adequate ventilation of the working area.

#### Eye / face protection

Wear eye/face protection.

#### Skin protection - Hand protection

Wear suitable gloves.

#### Skin protection - Other

Wear suitable protective clothing.

## SECTION 9: Physical and chemical properties

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

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## 9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Yellowish
Odour	smell of solvent
Odour threshold	No data available
pH	No data available
Melting point	No data available
Freezing Point	No data available
Initial boiling point	= 145
Flash point	38
Evaporation rate	Not determined
Flammability (solid, gas)	Not applicable.
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Fat Solubility	No data available
Partition coefficient	Not determined
Autoignition temperature	Not applicable.
Viscosity	No data available
Explosive properties	Not determined
Oxidising properties	Not determined
Solubility	No data available

## 9.2. Other information

Conductivity	No data available
Surface tension	No data available
Gas group	No data available
Benzene Content	No data available
Lead content	No data available
VOC (Volatile organic compounds)	No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Water.

### 10.2. Chemical stability

No data is available on this product.

### 10.3. Possibility of hazardous reactions

Amines. Alcohols.

### 10.4. Conditions to avoid

No data is available on this product.

### 10.5. Incompatible materials

No data is available on this product.

### 10.6. Hazardous decomposition products

No hazardous decomposition products if stored and handled as prescribed/indicated.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity No data is available on this product.

Skin corrosion/irritation No data is available on this product.

Serious eye damage/irritation No data is available on this product.

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## 11.1. Information on toxicological effects

Respiratory or skin sensitisation	No data is available on this product.
Germ cell mutagenicity	No data is available on this product.
Carcinogenicity	No data is available on this product.
Reproductive toxicity	No data is available on this product.

## SECTION 12: Ecological information

### 12.2. Persistence and degradability

	No data is available on this product.
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### 12.3. Bioaccumulative potential

	No data is available on this product.
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### Partition coefficient

	External Line Marker Silk Not determined Hardener	2-methoxy-1-methylethyl acetate No data available
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### 12.4. Mobility in soil

	No data is available on this product.
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### 12.5. Results of PBT and vPvB assessment

	No data is available on this product.
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### 12.6. Other adverse effects

	No data is available on this product.
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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

	<p>Dispose in accordance with applicable international, national and local laws, ordinances and statutes.</p> <p>For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.</p> <p>After final product withdrawal, all residues must be removed from containers (drip-free, powder-free or paste-free). Once the product residues adhering to the walls of the containers have been rendered harmless, the product and hazard labels must be invalidated. Containers must be recycled in compliance with national legislation and environmental regulations.</p>
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## SECTION 14: Transport information

### Hazard pictograms

	
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### 14.1. UN number

	UN1866
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### 14.2. UN proper shipping name

	RESIN SOLUTION
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### 14.3. Transport hazard class(es)

ADR/RID	3
Subsidiary risk	-

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## 14.3. Transport hazard class(es)

IMDG	3
Subsidiary risk	-
IATA	3
Subsidiary risk	-

## 14.4. Packing group

Packing group	III
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## 14.5. Environmental hazards

Environmental hazards	No
Marine pollutant	No

## ADR/RID

Hazard ID	30
Tunnel Category	(D/E)

## IMDG

EmS Code	F-E S-E
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## IATA

Packing Instruction (Cargo)	366
Maximum quantity	220 L
Packing Instruction (Passenger)	355
Maximum quantity	60 L

## SECTION 15: Regulatory information

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

	<p>"COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC".</p> <p>"REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC".</p>
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## SECTION 16: Other information

### Other information

Revision	This document differs from the previous version in the following areas:. 14 - ADR/RID. 14 - IMDG. 14 - IATA.
Text of risk phrases in Section 3	R10 - Flammable R11 - Highly flammable. R20/21 - Harmful by inhalation and in contact with skin. R20 - Harmful by inhalation. R23 - Toxic by inhalation. R36/37/38 - Irritating to eyes, respiratory system and skin. R37 - Irritating to respiratory system. R38 - Irritating to skin.

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Other information	
Text of Hazard Statements in Section 3	R42/43 - May cause sensitisation by inhalation and skin contact. R43 - May cause sensitisation by skin contact.
	Skin Sens. 1: H317 - May cause an allergic skin reaction. Acute Tox. 4: H332 - Harmful if inhaled. Flam. Liq. 3: H226 - Flammable liquid and vapour. Acute Tox. 4: H312 - Harmful in contact with skin. Skin Irrit. 2: H315 - Causes skin irritation. Flam. Liq. 2: H225 - Highly flammable liquid and vapour. Eye Irrit. 2: H319 - Causes serious eye irritation. Acute Tox. 3: H331 - Toxic if inhaled. Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled. STOT SE 3: H335 - May cause respiratory irritation.
General information	
	This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy.
Further information	
	The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.