

Material Safety Data Sheet

TUFFSTUFF® Topcoat

Tuffstuff® Topcoat/MSDS/Jan 15

1. Identification of the Substance/Preparation of the Company

Trade name	TuffStuff Top Coat Resin
International Dialling	0044 1977 680 250
Identification of the product	Pigmented Unsaturated Polyester Resin in styrene
Use	Flat roof waterproofing
Company Identification	Tuff Waterproofing Limited, Unit 5, First Avenue, Sherburn in Elmet LS25 6PD 01977 680 250

2. Hazards and Identification

Flammable	-Xn: Flammable by inhalation -Xi: Irritating to eyes and skin
Other	May produce an allergic reaction
Physical risks	The mixture of product vapour and air could be explosive Strongly exothermic polymerisation may be caused by head, free radical formers or peroxides

3. Composition/Information on Ingredients

Name	EC no.	CAS no.	Content	Symbol	R-phrases
Styrene		100-42-5	29%	Xn	R10, R20, R36/38
Phthalic anhydride		85-44-9	0.05-0.2%	Xn	R22, R37/28, R41, R42/43
Cobalt Octorate		136-52-7	0.05-0.2%	Xi	R38, R43a
See section 16 for explanation to R-phrases					

4. First Aid Measures

Inhalation	Take person out of the contaminated area and remove patient to fresh air. Seek medical assistance immediately
Skin contact	Remove contaminated clothing and excess Wash area with soap and water and rinse with water
Eye contact	Promptly wash eyes with plenty of water while lifting the eye lids Seek medical attention if irritation continues
Ingestion	Do not induce vomiting Put under medical supervision If swallowed, seek immediate medical advice and show container or label to the doctor Give clean water to drink

5. Fire Fighting Measures

Extinguishing media	Recommended: Powder, foam or CO ₂ , Sand, Water Spray Bund area with sand to prevent run-off entering waterways and drains
Special Firefighting Procedures	Cool the container with sprayed water to avoid polymerisation Eliminate all sources of combustion Treat as hydrocarbon fire Limit spreading of extinguishing materials
Hazardous Combustion Products	By combustion, formation of toxic products: carbon, carbon monoxide, carbon dioxide
Protective Measures in Fire Flammability	Wear individual breathing apparatus Flammable liquid. Flash Point =31°C

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6. Accidental Released Measures

Personal precautions	Avoid inhaling vapours Wear protective equipment: gloves, goggles, boots Wear self-contained breathing apparatus
Environmental precautions	Do not discharge in sewers Do not allow this chemical to enter the environment If the product contaminates lakes, rivers or sewers, inform the appropriate authorities in accordance with local regulations
Spill Clean-up Methods	Recovery: Spread sand. Collect the product in a container pending future destruction. Remove all sources of ignition. NO SMOKING Disposal: Burn in an approved installation for liquids Incompatible materials: Wood, Sawdust

7. Storage and Handling

Usage Precautions	Mechanical ventilation or local exhaust ventilation is required, if used in enclosed spaces. After use, before eating, drinking or smoking wash all exposed skin with soap and water Do not smoke while using material
Storage Precautions	Take precautionary measures against electrostatic discharge Keep at temperature not exceeding 30°C Keep in cool, dry, ventilated storage and closed containers Keep away from heat, sparks and open flame No smoking Keep away from heat, sparks and open flame Equipment earthing
Storage Criteria	Incompatible materials: Strong oxidising agents. Catalyst and accelerators Recommended Packaging Materials: Metal packaging. GRP Tanks (Reinforced Glass Polyester) except those not recommended Unsuitable Packaging Materials: Aluminium. Copper or copper alloy and plastics

8. Exposure Controls/Personal Protection

Ingredient name	CAS number	Reference	Date	LT Exp 8 Hrs	ST Exp 15
Styrene	100-42-5	EH 40 (HSE)	2010	100ppm	250ppm
Phthalic Anhydride	85-44-9	EH 40 (HSE)	2010	4mg/m3	12mg/m3

Protective Equipment

Respirators	Do not breathe vapours Wear suitable respiratory protection (AB)
Protective Gloves	Wear solvent-proof gloves. (Neoprene)
Eye Protection	Wear approved safety glasses
Other protection	Wear suitable protective clothing
Hygienic work practices	Change work clothing daily before leaving work place. Eating, smoking and water fountains prohibited in immediate work area

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9. Physical and Chemical Properties

Appearance	Liquid
Colour	Blue
Odour	Styrene
Physical Data Comments	#Values related to styrene, not to the preparation Take precautionary measures against electrostatic discharges
Boiling Point (°C, Interval)	>145°C
Density/Specific Gravity (g/ml)	1.2 (20°C)
Vapour Pressure	#652 Pa (20°C)
Viscosity (Interval)	1.8 – 2.3 dPa.s
Solubility Description	Insoluble in water Soluble in most organic solvents
Flash Point (°C)	31°C
Method	DIN EN 22719 – ISO 2719
Auto Ignition Temperature (°C)	490°C
Flammability Limit – Lower (%)	1.1

10. Stability and Reactivity

Stability	Stable under normal storage conditions
Conditions to avoid	Avoid heat and light. Keep away from sources of ignition Polymerisation Description: Exothermic polymerisation may occur by: Strong oxidising agents, peroxides, radical formers
Hazardous composition of products	By thermal decomposition, formation of: Carbon, Carbon Monoxide (CO), Carbon

11. Toxicological Information

Sensitisation	May produce an allergic reaction
Inhalation	Harmful by inhalation Symptoms and signs include headache, dizziness or tiring
Skin	Irritating to skin
Eyes	Irritating to eyes
Threshold Limit Value (9TLV-8hrs TWA) Styrene (CAS 100-42-5) 50ppm. Source: Threshold limit values and biological exposure indices-current edition American Conference of Governmental Industrial Hygienists Occupational Exposure Limits (OEL). Source: Health and Safety Executive Guidance Notes EH40	
Long Term Exposure Limit	Short Term Exposure Limit
8 hour TWA value	10 min TWA value
Ppm	Mg m ³
100	420
	Ppm
	Mg m ³
	250
	1050
Inhalation Odour detectable at 10-25 ppm but harmless under 200ppm. At 200-400 there is a transient irritant effect on nasal passages. At 400-1000ppm increasing systematic effects such as dizziness, nausea and headaches. At 800ppm and over becomes intolerable to mucous membranes. At 10,000 and over may cause death in less than one hour.	
Ingestion	Severe irritation and symptoms similar to inhalation
Skin Contact	Irritant and defatting. May cause dermatitis and permit bacterial attack.
Eye Contact	Vapour at 200-400ppm has transient irritating effect on the eyes. Splashes extremely irritant and dangerous.

At 1 metre above material surface during application a typical level would be 20-25ppm. Keep windows closed and air handling units off in proximity to application of resins

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12. Ecological Information

Do not discharge into drains or water courses.
Degradability: Easily biodegradable

13. Disposal Considerations

Disposal methods Do not discharge into drains or the environment
Dispose to an authorised waste collection point

14. Transport Information

Transit labelling

Road Transport	
UN no. Road	1866
ADR Class no.	3
Classification Code	F1
ADR Packing Group	111
Hazard No. (ADR)	30 – Flammable liquid (flash point between 23°C and 61°C inclusive) or flammable liquid or solid in the molten state with a flash point above 61 C, heated to a temperature to or above its flash point, or self heating liquid
ADR Label no.	3
Proper Shipping Name (National)	Resin Solution
Rail Transport	
RID Class no.	3
RID Item no.	111
RID Packing Group	111
Sea Transport	
UN no. Sea	1866
IMDG	3
IMDG Packing Group	111
EMS no.	F-E, S-E
Marine Pollutant	No
Air Transport	
UN no. Air	1866
IATA/ICAO	3
IATA/ICAO	111

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15. Regulatory Information

Symbols

Contains	Styrene
Risk Phrases	R-10 Flammable
	R-20 Harmful by inhalation
	R-36/38 Irritating to eyes and skin
Safety Phrases	Contains cobalt octoate and pthalic anhydride
	S-23 Do not breathe gas/fumes
	S-36/37/39 Wear suitable protective clothing, gloves and eye/face protection
EU Directives	Directive 91/155/EEC amended by Directive 93/112/EEC and Directive 2001/58/EC: Safety data sheet Dangerous preparations: Directive 1999/45/EEC amended by Directive 2001/60/EC – OJEC L226 – 22/08/2001 Commission Directive 2004/73/EC of 29/04/2004 adapting to technical progress for the 29 th time Council Directive 67.548.EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (Official Journal L216 – 16/06/2004)

16. Other Information

Explanation of R-phrases in Section 3

R-10	Flammable
R-20	Harmful by inhalation
R-22	Harmful if swallowed
R-36/38	Irritating to eyes and skin
R-37/38	Irritating to respiratory system and skin
R-38	Irritating to skin
R41	Risk of serious damage to eye
R-42/43	May cause sensitisation by inhalation and skin contact
R43	May cause sensitisation by skin contact

User Notes

This information only applies to this product which conforms to the specification of Tuff Waterproofing Limited. In case of formulation or mixtures, the user must ensure that new hazards are not apparent in line with the above information. The information contained herein is based on our knowledge of the product, at the date of publishing and it is given in good faith. Please note the possible risks involved if this product is used for applications other than those for which it is intended. This sheet shall only be used and reproduced for Health and Safety purposes. The references to legislative and regulatory information and codes of practice are not exhaustive. Other applicable regulations may be considered. It is the responsibility of the user to communicate all information related to the protection of Health, Safety and the Environment contained within this Material Safety Data Sheet to those persons involved in the handling of this product.