

1 Identification of the Substance / Preparation of the Company

Trade name	Matrix Roofing Resin
International Dialling	++44 (0)1942 518 150
Identification of the product	Unsaturated Polyester Resin
Use	Industrial
Company identification	G & B (NW) Off Willow Road Wigan WN6 8RY 01942 518150

2 Hazards and Identification

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

3 Composition / Information on Ingredients

Name	EC no.	CAS no.	Content	Symbol	R-phrases
Styrene		100-42-5	40-45%	Xn	R10, R20, R36/38
Phthalic anhydride		85-44-9	0.05-0.2%	Xn	R22, R37/28, R41, R42/43
Cobalt Octoate		136-52-7	0.05-0.2%	Xi	R38, R43

See section 16 for explanations to R-phrases

4 First Aid Measures

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

5 Fire Fighting Measures

Extinguishing media	Recommended: Powder, foam or CO2 Sand, Water Spray Not Recommended: Water Jet
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	Wear individual breathing apparatus

6 Accidental Release Mechanism

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 appropriate authorities in accordance with local regulations
Spill Cleanup Methods:	Recovery: Spread Sand. Collect the product in a container pending future destruction Disposal: Burn in an approved installation for liquids Incompatible materials: Wood, Sawdust

7 Handling and Storage

Usage Precautions	Unloading recommended procedure: pumping or under nitrogen pressure Collect vapours at source Mechanical ventilation or local exhaust ventilation is required Do not smoke while using material Take precautionary measures against electrostatic discharge
Storage Precautions	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. Catalysts 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

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):	1.05-1.2 (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, radicalformers
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) 100ppm. Source: Threshold limit values and biological exposure indices-current edition American Conference of Governmental Industrial Hygienists Occupational Exposure Limits (OEL) Source: Health & 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	ppm	mg m-3
100	420	250	1050

Inhalation Odour detectable at 0.25 ppm. 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.

I2 Ecological Information

Ecotoxicity	The product is not expected to be hazardous to the environment
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I3 Disposal Considerations

Disposal methods	Do not discharge into drains or the environment Dispose to an authorised waste collection point
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I4 Transport Information

Transit labelling	
Road Transport	
UN No. Road	1866
ADR Class No	3
Classification Code	FI
ADR Packing Group	III
Hazard No. (ADR)	30 - Flammable liquid (flash point between 23oC and 61oC, inclusive) or flammable liquid or solid in the molten state with a flash point above 61oC, 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.	III
Rid Packing Group	III
Sea Transport	
UN No. Sea	1866
IMDG Class	3
IMDG Packing Group	III
EMS No	F-E, S-E
Marine Pollutant	No
Air Transport	
UN No. Air	1866
IATA/ICAO	3
IATA/ICAO	III

I5 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

I5 Regulatory Information (cont)

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 29th 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

Explanations of R-phrases in Section 3

R-10	Flammable.
R-20	Harmful by inhalation.
R-36/38	Irritating to eyes and skin.
R-22	Harmful if swallowed.
R-37/38	Irritating to respiratory system and skin.
R-41	Risk of serious damage to eye.
R-42/43	May cause sensitisation by inhalation and skin contact.
R-38	Irritating to skin.
R-43	May cause sensitisation by skin contact.

User Notes

This information only applies to this product which conforms to the specification of G&B (NW) Ltd. In case of formulations 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.