

# Technical Datasheet

## Roofing Resin



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### DESCRIPTION SPECIFICATION

Unsaturated polyester resin in Viscosity Rotothinner at 25°C 2.6 - 3.5 dPaS  
styrene monomer Monomer Content 39 - 44%  
Orthophthalic Appearance: Amber Thixotropic Liquid  
Low Reactivity  
Pre-Accelerated  
Mildly Thixotropic  
Unpigmented  
Low Styrene Emission

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### APPLICATION TYPICAL PROPERTIES

20°C, 2% MEKP(1)  
Hand Laminating (Roofing) Gel Time - 12-18 minutes  
Shelf Life - 6 months

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### CHARACTERISTICS CATALYST

Good Interlaminar Adhesion CUROX M400  
Good wet out BUTANOX HBO50  
Good Air Release BUTANOX LPT

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### USE AREAS

	Cast	Laminate
Roofing Flex Strength	120	220 MPa
Tensile Strength	72	136 MPa
Tensile Modulus	4.0	6.8 G.Pa
Elongation to Break	3.0%	-
H.D.T.	65°C	-
Barcol 943-1 hardness	-	35-40

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### HANDLING PRECAUTIONS AND STORAGE

Polyester resins which contain styrene monomer, an irritant liquid with a flash point below 32°C (90°F), are in general subject to the Highly Flammable Liquids and Liquid Petroleum Gases Regulations 1972. The resins should be stored cool, away from direct sunlight, in closed metal containers (such as the drums in which they are supplied) if maximum shelf life is to be maintained. The quantity of styrene vapour in the working atmosphere should not exceed the Threshold Limit value of 100ppm and when stored in bulk, adequate venting of large tanks is recommended together with a storage temperature not exceeding 0°C(68°F). It is preferable to wear gloves/goggles when handling polyester resin solutions to guard against any possible skin/eye irritation arising from the presence of styrene.

# Material Safety Datasheet

## Roofing Resin



### DESCRIPTION SPECIFICATION

#### 1. EMERGENCY TELEPHONE NUMBERS

01942 518150

#### 2. TRADE NAME

G&B Roofing Resin

#### CHEMICAL NAME (PRODUCT TYPE)

Solution of unsaturated polyester resin in styrene

64% Non-volatile unsaturated polyester resin in styrene

#### 3. PHYSICAL PROPERTIES

Appearance & odour: Pale coloured viscous liquid with characteristic odour of styrene

Solid	*Liquid*	Gas	Paste	Thixotropic
3a) Boiling Point °C		295oF/145°C	3b) Melting Point °C	not applicable
3c) Specific Gravity at 20°C		1.23	3d) Miscibility in Water	Immiscible
3e) Flash Point (Closed Cup)		32°C	3f) Total Lead Content	Zero
3g) Explosion Limits in volume % in air pure oxygen)		Lower 1.1 Upper 6.1	3h) Spontaneous Combustion Temperature	490°C in air (450°C in
			3i) Acidity/Alkalinity/PH	-

#### 4) TOXICOLOGICAL DATA

4a) Threshold Limit Value (TLV-8hrs TWA) Styrene (CAS 100-42-5) 100ppm

Source: Threshold limit values and Biological exposure indices for

4b) Occupational Exposure Limits (OEL) Source: EH 40/88

	Long Term Exposure Limit 8 hr TWA value		Short Term Exposure Limit 10 min. TWA value	
	ppm	mg m-3	ppm	mg m-3
Styrene (control limit)	100	420	250	1050

4c) 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 headache. At 800ppm and over becomes intolerable to mucous membranes. At 10,000 and over may cause death in less than one hour.

4d) Ingestion. Severe irritation and symptoms similar to inhalation.

4e) Skin Contact Irritant and defatting. may cause dermatitis and permit bacterial attack.

4f) Eye Contact Vapour at 200-400ppm has transient irritating effect on the eyes. Splashes extremely irritant and dangerous.

#### 5 FIRST AID - EMERGENCY ACTION

5a) Inhalation: Remove patient to open air and seek medical assistance immediately.

5b) Ingestion: Seek medical aid immediately. Severe irritant. Drink copious amounts of water.

5c) Skin Contact: Remove excess, wash with soap and water and/or proprietary cleansing cream.

5d) Eye Contact: Wash out with copious amounts of water and/or approved eye lotion. Seek medical advice.

#### 6 LABELLING INFORMATION

6a) IMCO CLASN : 3.3 IMCO PAGE : 3153 SI No./UN No. 1866

6b) This product contains the substance(s) which are:

Highly Inflammable	Corrosive	X Irritating X
Toxic	Harmful	Oxidising

in the sense of current UK and EEC legislative requirements:

6c) This product contains the substance(s)

EEC No:	Chemical Name of Solvent/Substance	% Weight	Danger Class
601-026-00-0	Styrene	26	Xi (SI 1244)

6d) Label Reference 074

#### 7 STORAGE AND HANDLING

7a) Environmental Health Hazards: None known, other than stated on this document

7b) Dangerous Decomposition Products: None known.

7c) Storage: Store in closed container uner dry, colol conditions: maximum recommended storage time: 6 months.

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7d) Conditions for opened drums (e.g. hygroscopic). Include reactions. Containers should be resealed immediately after use and re-stored under dry, cool conditions.

7e) The following protective clothing is recommended:

**X Goggles X**

**X Gloves X**

**X Face Mask X**

NOTE: A GOOD STANDARD OF PERSONAL AND INDUSTRIAL HYGIENE SHOULD BE MAINTAINED AT ALL TIMES

7g) Ventilation: Ensure efficient ventilation in working area.

7h) Spillages: Should be soaked up with absorbent inert material (e.g. sand or earth) and collected for disposal in closed containers.

7i) Empty Drums Empty drums may contain residual resin and due care should be taken to avoid inhalation and eye/skin contact. Additionally, there may be solvent vapour build-up. Store away from source of ignition.

7j) Waste Disposal Notifiable waste. Dump or burn under controlled conditions. Contact Local Authority for advice.

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### 8 FIRE - EMERGENCY ACTION: CALL FIRE BRIGADE IMMEDIATELY

Extinguishing Method:

DO NOT USE WATER

**X Carbon Dioxide X**

**X Dry Chemical X**

**X Foam X**

Water

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### 9 SUPPLEMENTARY INFORMATION ATTACHED

This Health and Safety Product Information Sheet has been approved by:

1 \_\_\_\_\_

2 \_\_\_\_\_

The gel time and viscosity of this material has been adjusted for seasonal temperature variations. The gel time can be identified from the six-digit identification number on the batch label of the container. Example: 20.15.02 (The first two digits represent the amount of working time in minutes (20 minutes), the second two digits represent the temperature at which the test was carried out (in this case 15°C) the last two digits show the amount of catalyst added as a percentage (2%.)

# Technical Datasheet

## Roofing Topcoat



### DESCRIPTION SPECIFICATION

Unsaturated polyester resin in Viscosity Rotothinner at 25°C 2.6 - 3.5 dPaS  
styrene monomer Monomer Content 39 - 44%  
Grey Pigmented Liquid  
Medium Reactivity  
Pre-Accelerated  
Thixotropic  
Clear or pigmented  
Low Styrene Emission  
S.G. 1.12

### SPECIFICATION

HIDE	Complete at 500 micron
Appearance	Grey Thixotropic Liquid

### APPLICATION

Brush topcoat or roller applied

### TYPICAL PROPERTIES

25°C, 1.8% MEK Peroxide

Gel Time 12-15 minutes

Shelf Life 6 months

Viscosity 25°C RVT 180-230 poise

Spindle No 5 @ 5rpm

Gel time will vary depending on Winter or Summer grade. (The gel time is adjusted for seasonal temperature variations and the gel time can be identified from the six-digit identification number on the batch label of the container. Example: 20.15.02 (first two digits is the gel time in minutes, the second two is the temperature in Celcius, the last two is the percentage of catalyst required to cure the topcoat- In this example the batch would cure in 20 minutes at a temperature of 15°C with the addition of 2% catalyst))

### CHARACTERISTICS

Medium chemical resistance

Medium heat resistance >100°C

Resilient

High Elongation >3%

### USE AREAS

Roofing / Sheathing

### CATALYST (MEKP)

Curox M400/M300	Andenox KP-9	Butanox HBO50	Butanox LPT
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### HANDLING PRECAUTIONS AND STORAGE

DO NOT APPLY TO SUBSTRATES OVER 45°C. IT MAY RESULT IN SOME SURFACE TACK/ UNDERCURE. G&B Polyester resins which contain styrene monomer, an irritant liquid with a flash point below 32°C (90°F), are in general subject to the Highly Flammable Liquids and Liquid Petroleum Gases Regulations 1972. The resins should be stored cool, away from direct sunlight in closed containers (such as the containers in which they are supplied) if maximum shelf life is to be maintained. The quantity of styrene vapour in the working atmosphere should not exceed the Occupational Exposure. Limit of 100ppm and when stored in bulk, adequate venting of large tanks is recommended together with a storage temperature not exceeding 20°C (68°F). It is preferable to wear gloves/ goggles when handling polyester resin solutions to guard against any possible skin/eye irritation arising from the presence of styrene. \*While every attempt is made to ensure colour consistency, there may be some shade differences from batch to batch. A small brush stroke of the topcoat is applied to each can to show the colour of the contents. It is recommended that you order your topcoat in bulk to ensure consistency between cans.



# Material Safety Datasheet

## Roofing Topcoat

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### 8. FIRE - EMERGENCY ACTION - CALL FIRE BRIGADE IMMEDIATELY

Extinguishing Method

**X Carbon Dioxide X**

**X Dry Chemical X**

**X Foam X**

Water

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### 9. SUPPLEMENTARY INFORMATION ATTACHED

a) Technical Data Sheet: This Health and Safety Product Information Sheet has been approved by:

  
  

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