

STRONGHOLD
GRP ROOFING SYSTEM

STRONGHOLD
GRP TOPCOAT
SAFETY DATA SHEET

CONTENTS

Page 3

SECTION 1:
Identification of the
Substance/Mixture and of
the Company/Undertaking

SECTION 2:
Hazards Identification

Page 4

SECTION 3:
Composition/Information
on Ingredients

SECTION 4:
First Aid Measures

Page 5

SECTION 5:
Firefighting Measures

SECTION 6:
Accidental Release Measures

Page 6

SECTION 7:
Handling and Storage

SECTION 8:
Exposure Controls /
Personal Protection

Page 7

SECTION 9:
Physical and
Chemical Properties

Page 8

SECTION 10:
Stability and Reactivity

Page 9

SECTION 11:
Toxicological Information

SECTION 12:
Ecological Information

Page 10

SECTION 13:
Disposal Considerations

SECTION 14:
Transport Information

Page 11

SECTION 15:
Regulatory Information

SECTION 16:
Other Information

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product name: Stronghold Topcoat 202
Chemical name: Unsaturated polyester resin
Product form: Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Topcoat for Glass Reinforced Plastic (GRP) Roofing.
Contact the manufacturer for any other application.

1.3 Details of the Supplier of the safety data sheet

Manufacturer/Supplier: The Glass Fibre Roofing Company Ltd.
Address: Unit 33 Pontygwindy Industrial Estate, Caerphilly CF83 3HU
Telephone number: 02920 888020
E-mail: sales@strongholdgrp.co.uk

This document is available online at <http://www.strongholdgrp.co.uk>

1.4 Emergency telephone numbers

UK Telephone number: 02920 888020 (Office hours only)
UK Urgent medical problem: 111 (NHS Direct)
UK Life-threatening emergency: 999

SECTION 2: Hazards Identification

2.1 Classification according to Regulation (EC) No 1272/2008 (CLP)

Skin corrosion/irritation:	Category 2
Serious eye damage/eye irritation:	Category 2
Acute toxicity (inhalation: dust, mist):	Category 4
Reproductive Toxicity:	Category 2
Specific Target Organ Toxicity (repeated exposure):	Category 1
Carcinogenicity:	Category 2
Chronic Aquatic Toxicity:	Category 1
Flammable liquids:	Category 3

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms:



Signal word:

Danger

Hazard statements:

Flammable liquid and vapour	H226
Causes skin irritation	H315
Causes serious eye irritation	H319
Suspected of damaging the unborn child	H361d
Causes damage to organs through prolonged or repeated exposure if inhaled	H372
Suspected of causing cancer	H351
Very toxic to aquatic life with long lasting effects	H410

Precautionary statements - Prevention:

Keep away from heat/sparks/open flames/ hot surfaces – no smoking	P210
Use explosion proof electrical equipment	P241
Wash hands thoroughly after handling	P264
Use only outdoors in a well ventilated area	P271
Avoid release to the environment	P273
Wear protective gloves/protective clothing/eye protection/face protection	P280

Precautionary statements - Response:

In case of fire: Use Water fog, foam, extinguishing powder, carbon dioxide (CO₂) for extinction P370+P378

Other hazards: No information available.

SECTION 3: Composition/Information on Ingredients**3.1 Substances**

Chemical name	CAS-No. EC-No. REACH Registration No.	% Weight	GHS Classification
Styrene	100-42-5 202-851-5 01-2119457861-32	25 – 50	Flam. Liq. 3 (H226) Repr. 2 (H361d) Acute Tox. 4 (Inhalation) (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Asp. Tox. 1 (H304) STOT SE 3 (H335) STOT RE 1 (H372) Aquatic Chronic 3 (H412)

SECTION 4: First Aid Measures**4.1 Description of first aid measures**

General advice:	Show this safety data sheet to the doctor in attendance. DO NOT breathe dust/fume/gas/mist/ vapours/spray.
Eye Contact:	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin contact:	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Inhalation:	Move to fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion:	DO NOT induce vomiting. Rinse mouth. Consult a physician.

Protection of first-aiders: Use personal protective equipment. See section 8 for more info.

4.2 Most important symptoms and effects, both acute and delayed

Eye Contact: Irritating to eyes.

Skin contact: Irritating to skin.
May cause sensitisation by skin contact.

Inhalation: Danger of serious damage to health by prolonged exposure through inhalation.
Irritating to respiratory system.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: No information available.

SECTION 5: Firefighting Measures

5.1 Extinguishing media

Suitable extinguishing media: Dry chemical, Foam, Carbon dioxide (CO₂), (closed systems).

Unsuitable extinguishing media: DO NOT use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Fire hazard: Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

Explosion hazard: Vapours may form explosive mixtures with air. Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
Heating or fire can release toxic gas: Carbon monoxide.

5.3 Advice for firefighters

Protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.

Other information: Cool containers/ tanks with water spray.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Remove all sources of ignition, heat, flames and sparks.
Take precautionary measures against static charges. Ensure adequate ventilation.
Use personal protective equipment.

For emergency responders: Avoid breathing vapours or mists. In the event of fire and/or explosion DO NOT breathe fumes. Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions: The product should not be allowed to enter drains, water courses or the soil.
DO NOT flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Use clean non-sparking tools to collect absorbed material.

6.4 Reference to other sections

See section 8 and section 12 for more information.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Precautions for safe handling: Avoid static electricity build up with connection to earth.
Use only in area provided with appropriate exhaust ventilation.
In case of insufficient ventilation, wear suitable respiratory equipment.
For personal protection see section 8.

Prevention of fire and explosion: Keep away from open flames, hot surfaces and sources of ignition.
Empty containers may contain flammable or explosive vapours.

Hygiene measures: When using, DO NOT eat, drink or smoke. Wash hands before breaks and at the end of the workday. Provide regular cleaning of equipment, work area and clothing.

7.2 Conditions for safe storage, 3 including any incompatibilities

Technical measures & Storage conditions: Keep in a dry, cool and well-ventilated place.
Keep at temperature not exceeding 30°C.
Keep away from heat and sources of ignition.

Materials to avoid: Strong oxidizing agents, peroxides, reducing agents.

Packaging material: Metallic GRP (Glass Reinforced Plastic) containers.

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

Occupational exposure limits

Chemical name	TWA – 8 hours	STEL – 15 mins
Styrene 100-42-5	100 ppm – 430 mg/m ³	250 ppm 1080 mg/m ³

8.2 Exposure controls

Occupational exposure limits

Engineering measures: Apply technical measures to comply with the occupational exposure limits.
When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Personal protective equipment

General Information:	Use personal protective equipment.
Respiratory protection:	Provide a good standard of ventilation (not less than 3 to 5 air changes per hour) If exposure limits are likely to be exceeded (in case of insufficient ventilation) wear suitable respiratory equipment: Breathing apparatus with filter Type A (Organic gases and vapours filler conforming to EN 14387, APF40 < 1 hour. APF 200 > 1 hour) I Type A(2)/P3 in combination with Particulates filler conforming to EN 143, if exposed to dust.
Eye protection:	Safety glasses with side-shields. DO NOT wear contact lenses.
Skin and body protection:	Wear fire flame resistant/retardant clothing. Antistatic/ protective shoes or boots.
Hand protection:	Wear chemically resistant gloves (tested to EN 374) in combination with "basic" employee training.

Environmental exposure controls

Environmental exposure controls:	DO NOT allow material to contaminate ground water system.
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SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Property	Values	Remark
Appearance	Grey	Dependent on pigment
Physical state	Liquid	
Particle size		No data available
Odour	Styrene	
Odour threshold	0.15 ppm	Values related to styrene
pH		No data available
Melting point/range	-30°C	Values related to styrene
Freezing point		No data available
Boiling point	145°C	Values related to styrene
Flash point	32°C	Values related to styrene
Evaporation rate		No data available
Flammability limits in air		
Upper	6.1 – 6.8 %	Values related to styrene
Lower	0.9 – 1.1 %	Values related to styrene
Vapour pressure	1 kPa @ 25°C	Values related to styrene
Vapour density	3.6	Values related to styrene
Density	1.03 – 1.10 g/cm ³ @ 20°C	Values related to styrene

Water solubility	Insoluble in water	No data available
Partition coefficient	3	Values related to styrene
n-octanol/water		
Solubility in other solvents	Medium – Organic solvents Medium – Phthalates	Values related to styrene
Auto ignition temperature	490 °C	Values related to styrene
Decomposition temperature		No data available
Viscosity, kinematic	xxx – xxx mm ² /s @ 25°C	
Viscosity, dynamic	800 - 1,000 mPa s @ 25°C	
Explosive properties		No data available
Oxidizing properties		No data available

Other safety information

Property	Values	Remark
Solubility in other solvents	Soluble in most organic solvents	Values related to styrene

SECTION 10: Stability and Reactivity

10.1 Reactivity

Product may ignite and burn at temperatures exceeding the flash point.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

In use, may form flammable/explosive vapour-air mixture.

10.4 Conditions to avoid

Heat, flames and sparks. Exposure to light. Take precautionary measures against static charges.

10.5 Incompatible materials

Strong oxidizing agents, peroxides, reducing agents.

10.6 Hazardous decomposition products

Incomplete combustion and thermolysis produces potentially toxic gases such as carbon monoxide and carbon dioxide.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Inhalation: Danger of serious damage to health by prolonged exposure through inhalation. Irritating to respiratory system.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Chemical name	LD50 Oral	LD50 Dermal	ATE CLP (dust, mist)
Styrene 100-42-5	> 5000 mg/kg	> 5000 mg/kg	3,000 mg/L 4h

Skin corrosion/irritant: Causes skin irritation.

Serious Eye Damage/Eye Irritation: Causes serious eye irritation.

Respiratory or skin sensitisation: Not classified

Mutagenic effects: Not classified

Carcinogenicity: Suspected of causing cancer.

Reproductive toxicity: Suspected of damaging fertility or the unborn child.

Specific target organ toxicity (single exposure): Not classified

Specific target organ toxicity (repeated exposure): Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard: Due to the viscosity, this product does not present an aspiration hazard.

Other information: None

SECTION 12: Ecological Information

12.1 Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. DO NOT flush into surface water or sanitary system.

Acute aquatic toxicity – component information

Chemical name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish
Styrene 100-42-5	EC50 (72h) = 4.9 mg/L	EC50 (48h) = 4.7 mg/L	LC50 (96h) = 4.02 mg/L

12.2 Persistence and degradability

No additional information available

12.3 Bio accumulative potential

No additional information available

12.4 Mobility in soil

No additional information available

12.5 Results of PBT and vPvB assessment

No additional information available

12.6 Other adverse effects

None known

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Waste from residues / unused:	Dispose in accordance with the European Directives on waste and hazardous waste.
Products:	DO NOT flush into surface water or sanitary sewer system.
Contaminated packaging:	Empty containers should be taken to an approved hazardous or special waste handling site for recycling and disposal.
Other information:	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste Codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport Information

ADR/RID	IMDG/IMO	ICAO/IATA	ADN
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14.1 UN Number

UN1866	UN1866	UN1866	UN1866
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14.2 UN proper shipping name

UN1866, RESIN SOLUTION, 3, PG III, (D/E)	UN1866, RESIN SOLUTION, 3, PG III, (31 °C c.c.)	UN1866, RESIN SOLUTION, 3, PG III	UN1866, RESIN SOLUTION, 3, PG III
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14.3 Transport hazard class

Hazard class 3	Hazard class 3	Hazard class 3	Hazard class 3
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14.4 Packing group

III	III	III	III
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14.5 Environmental hazards

No	No	No	No
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Marine pollutant: No

14.6 Special precautions for user

ADR/RID	Classification code:	F1
	Tunnel restriction code:	(D/E)
	Limited quantity:	5L
IMDG/IMO	EmS:	F-E, S-E
	Limited quantity:	5L
ICAO/IATA	ERG Code:	3L
	Limited quantity:	10L
ADN	Classification code:	F1
	Limited quantity:	5L
	Ventilation:	VE01

Special precautions for users: No information available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory Information

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

Regulation (EC) No. 1907/2006 (REACH)

Regulation (EC) No. 1272/2008 (CLP)

Regulation (EU) No. 830/2015

Directive 88/642/EEC

Directive 98/24/EC

Directive 1999/92/EC

Directive 2012/18/EU

Contains no substances with REACH Annex XVII restrictions

Contains no substances on the REACH candidate list

SECTION 16: Other Information

None.

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, in formation and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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 process, unless specified in the text.

End of Material Safety Data Sheet