

STRONGHOLD
GRP ROOFING SYSTEM

STRONGHOLD CATALYST

SAFETY DATA SHEET

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

1.1 Product identifier

Product name: Stronghold Catalyst 601
Chemical name: Organic Peroxide
Product form: Mixture

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

Relevant identified uses: Catalyst 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)

Flammable liquids:	Category 2	H226 Flammable liquid and vapour.
Skin corrosion:	Category 1B	H314: Causes severe skin/eye damage.
Acute toxicity:	Category 4	H302 Harmful if swallowed.
Organic peroxides:	Type D	H242 Heating may cause a fire.

Classification (67/548/EEC, 1999/45/EC)

Oxidising:	R 7: May cause fire.
Corrosive:	R10: Flammable.
Harmful:	R34: Causes burns.
	R22: Harmful if swallowed.

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
Heating may cause a fire	H242
Harmful if swallowed	H302
Causes severe skin burns and eye damage	H314

Precautionary statements - Prevention:

Keep away from heat/sparks/open flames/ hot surfaces – no smoking	P210
Keep/store away from clothing/ strong acids, bases, heavy metal salts and other reducing substances /combustible materials	P220
Keep cool	P235
Do not get in eyes, on skin, or on clothing	P262
Wear protective gloves/protective clothing/eye protection/face protection	P280

Precautionary statements - Response:

IF IN EYES: Rinse cautiously with water for several minutes.	P305+P351+P338
Remove contact lenses, if present and easy to do. Continue rinsing	
Get immediate medical advice/ attention	P315
Use dry sand, dry chemical or alcohol-resistant foam for extinction	P378

Precautionary statements - Storage:

Store in a well-ventilated place. Keep container tightly closed	P403 + P233
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Precautionary statements - Disposal:

Dispose of contents/ container to an approved waste disposal plant	P501
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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
Methyl Ethyl Ketone Peroxide	1338-23-4 215-661-2 01-211951469143-0000	>=25 - <35	Org. Perox. C (H242) Acute Tox. 4 (H302) Skin Corr. 1B (H314)
4-Hydroxy-4-Methylpentan-2-one	123-42-2 204-626-7	>=12.5 - <15	Flam. Liq. 2 (H225) Eye Irrit. 2 (H319) STOT SE 3 (H336)
Butanone	78-93-3 201-159-0	>= 3 - < 5	Flam. Liq. 2 (H225) Eye Irrit. 2 (H319) STOT SE 3 (H336)
Hydrogen Peroxide Solution	7722-84-1 231-765-0	>= 3 - < 5	Ox. Liq. 1 (H271) Acute Tox. 4 (H332) Acute Tox. 4 (H302) Skin Corr. 1A (H314)

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

General advice:	Take off all contaminated clothing immediately. Never give anything by mouth to an unconscious person.
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General advice (cont.):	Remove from exposure, and lie down. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Eye Contact:	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin contact:	Wash off immediately with soap and plenty of water.
Inhalation:	Move to fresh air. Consult a physician immediately.
Ingestion:	Clean mouth with water and drink afterwards plenty of water. If a person vomits when lying on his back, place him in the recovery position. DO NOT induce vomiting. If swallowed, seek medical advice immediately and show this container or label.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting Measures

5.1 Extinguishing media

Suitable extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
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 Cool closed containers exposed to fire with water spray. DO NOT allow run-off from fire-fighting to enter drains or water courses.
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5.3 Advice for firefighters

Protective equipment for firefighters:	Use personal protective equipment.
Other information:	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

Wear respiratory protection. Wear personal protective equipment.

6.2 Environmental precautions

Environmental precautions:	Avoid subsoil penetration. DO NOT allow material to contaminate ground water system. DO NOT contaminate water. If the product contaminates rivers and lakes or drains inform respective authorities. DO NOT let product enter drains.
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6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Remove mechanically and with care (e.g. with clean polyethylene plastic shovel). Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

6.4 Reference to other sections

See sections 7, 8, 11, 12 and 13 for more information.

6.5 Other information

Never add other substances or waste material to product residue. Move product residue to a safe place and dispose of properly.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Precautions for safe handling: For personal protection see section 8.

Dust explosion class: No data available

7.2 Conditions for safe storage, 3 including any incompatibilities

Technical measures & Storage conditions: Electrical installations / working materials and containers must comply with the technological safety standards. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep containers tightly closed. No smoking.

Materials to avoid: Avoid impurities (e.g. rust, dust, ash), risk of decomposition.

Storage temperature: < 30 °C

Other data: Storing temperature for reasons of quality. Liquid up to -25 °C.

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

Chemical name	CAS-No.	Control parameters	Basis	Update
4-hydroxy-4-methylpentan-2-one (diacetone alcohol)	123-42-2	AGW: 96 mg/m ³ , 20 ppm	DE TRGS 900	01-2006
Methylethylketone	78-93-3	AGW: 600 mg/m ³ , 200 ppm	DE TRGS 900	01-2006
4-hydroxy-4-methylpentan-2-one	123-42-2	AGW: 96 mg/m ³ , 20 ppm DFG, H,	DE TRGS 900	2006-01-01
Butanone	78-93-3	AGW: 600 mg/m ³ , 200 ppm DFG, H, Y,	DE TRGS 900	2006-01-01

Other information on limit values: see chapter 16

Biological occupational exposure limits - TRGS903

Chemical name	CAS-No.	Control parameters	Sampling time	Update
Butanone	78-93-3	2-butanon: 5 mg/l (U)	a	2004-08-01

Remarks:

- a No time limit
- b Immediately after exposition or after working hours
- c In case of long-term exposition: after more than one shift
- d Before the next shift

8.2 Exposure controls

Occupational exposure limits

Engineering measures: Provide adequate ventilation.

Personal protective equipment

Remarks: Skin should be washed after contact.

Respiratory protection: Short duration filter unit: Filter A

Eye protection: Tightly fitting safety goggles
Face protection.

Skin and body protection: Protective suit
Remove and wash contaminated clothing before re-use.

Hand protection: Material: butyl-rubber
Glove thickness: 0,5 mm
Break through time: \geq 8 h

Hygiene measures: Wash hands before breaks and immediately after handling the product.
Keep away from food, drink and animal feeding stuffs.

Environmental exposure controls

Environmental exposure controls: Avoid subsoil penetration.
Do not allow material to contaminate ground water system.
Do not contaminate water.
If the product contaminates rivers and lakes or drains inform respective authorities.
Do not let product enter drains.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Property	Values	Remark
Appearance	Colourless	
Physical state	Liquid	
Particle size	No data available	No data available
Odour	Characteristic	
Odour threshold	No data available	No data available
pH	No data available	No data available
Melting point/range	<-25°C	
Freezing point	<-25°C	
Boiling point	145°C	
Flash point	57°C	
Evaporation rate	Not relevant	No data available
Flammability limits in air		
Upper	Not applicable	No data available
Lower	Not applicable	No data available
Vapour pressure	0.184 Pa @ 25°C	
Vapour density	No data available	No data available
Density	1.01 g/cm ³ @ 20°C	
Water solubility	Ca. 6.5 g/l at 20°C	
Partition coefficient	Log Pow: <0.3 at 25°C	
n-octanol/water		
Solubility in other solvents	Mixable Medium – Phthalates	
Auto ignition temperature	Not applicable	Decomposes on heating
Decomposition temperature	ca. 60 °C, SADT (UN test H.4),	SADT possible at temperatures above approximately 60 °C.
Viscosity, kinematic	No data available	No data available
Viscosity, dynamic	13 mPa.s at 20 °C	
Explosive properties	No data available	No data available
Oxidizing properties	Organic peroxide	

Other safety information

Property	Values	Remark
Refractive index	1,431 at 20 °C	

SECTION 10: Stability and Reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

Contact with incompatible substances can cause disintegration at or below SADT.

10.3 Possibility of hazardous reactions

Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Keep away from heat and sources of ignition.

10.5 Incompatible materials

Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents, Avoid impurities (e.g. rust, dust, ash), risk of decomposition.

10.6 Hazardous decomposition products

Irritant, caustic, flammable, noxious/toxic gases and vapours can develop in the case of fire and decomposition. Thermal decomposition: ca. 60 °C Method: SADT (UN test H.4)

Note: SADT possible at temperatures above approximately 60 °C.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Butanone - Inhalation: Inhalation of high vapour concentrations can cause CNS-depression and narcosis. Inhalation of vapours in high concentration may cause shortness of breath (lung oedema).

Chemical name	LD50 Oral	LD50 Dermal	Inhalation
Methyl Ethyl Ketone Peroxide (40% in dimethylphthalate)	1.017 mg/kg	4.000 mg/kg	17(4h)mg/l *

* **Note:** Aerosol, Nominal concentration

Skin corrosion/irritant: Causes burns.

Serious Eye Damage/Eye Irritation: Causes burns.

Respiratory or skin sensitisation:	Method: Maximisation Test Test substance: Methyl Ethyl Ketone Peroxide (60% in dimethylphthalate/diacetone alcohol) Did not cause sensitization on laboratory animals. Germ cell mutagenicity Genotoxicity in vitro: Not mutagenic in Ames Test.
Carcinogenicity:	No data available
Reproductive toxicity:	No data available
Teratogenicity:	Not classified
Specific target organ toxicity (single exposure):	No data available
Specific target organ toxicity (repeated exposure):	No data available
Aspiration hazard:	No data available

SECTION 12: Ecological Information

12.1 Toxicity

Chemical name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to bacteria
Methyl Ethyl Ketone Peroxide (33% in dimethylphthalate)			LC50 (96h) = 44.2 mg/L	EC50 (30m) = 48 mg/L
Methyl Ethyl Ketone Peroxide (40% in dimethylphthalate)	EC50 (72h) = 5.6 mg/L	EC50 (48h) = 39 mg/L		

12.2 Persistence and degradability

Biodegradability:	Readily biodegradable.
Method:	Closed Bottle Test
Test substance:	Methyl Ethyl Ketone Peroxide (MEKP)

12.3 Bio accumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

12.6 Other adverse effects

No data available

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Disposal: Dispose of in conjunction with appropriate waste disposal authorities and in accordance with disposal regulations.
Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport Information

ADR	RID	IATA	IMDG
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14.1 UN Number

UN3105	UN3105	UN3105	UN3105
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14.2 UN proper shipping name

ORGANIC PEROXIDE TYPE D, LIQUID (Methyl Ethyl Ketone Peroxide)	ORGANIC PEROXIDE TYPE D, LIQUID (Methyl Ethyl Ketone Peroxide)	ORGANIC PEROXIDE TYPE D, LIQUID (Methyl Ethyl Ketone Peroxide)	ORGANIC PEROXIDE TYPE D, LIQUID (Methyl Ethyl Ketone Peroxide)
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14.3 Transport hazard class

5.2	5.2	5.2	5.2
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14.4 Packing group

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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	Classification code: Tunnel restriction code: Limited quantity:	P1 (D) LQ16
RID	Classification code: Hazard identification No.: Limited quantity:	P1 539 LQ16
IATA	Labels: Packing instruction:	5.2 (HEAT) 570
IMDG	EmS:	F-J, S-R
Marine pollutant:	No	
Special precautions for users:	See chapter 6, 7 and 8.	

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

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