SAFETY DATA SHEET
STYCCOBOND F84 RESIN

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	STYCCOBOND F84 RESIN
Product number	F3579
Internal identification	SBF84R/15

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

Identified uses	Component of epoxy resin based system
Uses advised against	None

1.3. Details of the supplier of the safety data sheet

Supplier	F.Ball and Co. Ltd. Churnetside Business Park, Station Road, Cheddleton, Leek, Staffordshire. ST13 7RS Tel: 01538 361633 Mon-Fri 8.30am-5.00pm (Exc Bank Holidays) Fax: 01538 361622 E.mail: msds@f-ball.co.uk

1.4. Emergency telephone number

Emergency telephone	01538 361633 Mon-Fri 8.30am - 5.00pm (excluding Bank Holidays)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards	Not Classified
Health hazards	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317
Environmental hazards	Aquatic Chronic 2 - H411

Classification (67/548/EEC or 1999/45/EC)	Xi; R36/38. N; R51/53. R43
Human health	The liquid is irritating to eyes and skin. Risk of sensitisation by skin contact
Environmental	The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.
Physicochemical	When handled correctly, undamaged units represent no danger.

2.2. Label elements

STYCCOBOND F84 RESIN

Pictogram

Signal word	Warning
Hazard statements	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	P264 Wash contaminated skin thoroughly after handling. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 IF ON SKIN: Wash with plenty of water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P313 Get medical advice/attention.
Contains	EPOXY RESIN (Number average MW <= 700), BISPHENOL F EPOXY RESIN, C13/15 ALKYLGLYCIDYL ETHER, OXIRANE, MONO [(C12-14- ALKYLOXY)METHYL] DERIVS
Supplementary precautionary statements	P501 Dispose of contents/container in accordance with national regulations.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

EPOXY RESIN (Number average MW <= 700) **10-30%**

CAS number: 25068-38-6 | EC number: 500-033-5 | REACH registration number: 01-2119456619-26

Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411	R43 Xi;R36/38 N;R51/53

BISPHENOL F EPOXY RESIN **1-5%**

CAS number: 9003-36-5 | REACH registration number: 01-2119454392-40

Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411	Xi;R36/38. N;R51/53. R43.

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C13/15 ALKYLGLYCIDYL ETHER		1-5%
CAS number: 68081-84-5	EC number: 268-358-2	

Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411	Xi;R36/38. N;R51/53. R43.

OXIRANE, MONO [(C12-14- ALKYLOXY)METHYL] DERIVS		1-5%
CAS number: 68609-97-2	REACH registration number: 01-2119485289	

Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Irrit. 2 - H315 Skin Sens. 1 - H317	R43 Xi;R38

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC		1-5%
CAS number: 64742-95-6	EC number: 265-199-0	

Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Liq. 3 - H226 Asp. Tox. 1 - H304 STOT SE 3 - H335, H336 Aquatic Chronic 2 - H411	Xn;R65. Xi;R37. N;R51/53. R10,R66,R67.

4-NONYLPHENOL, Branched		<1%
CAS number: 84852-15-3	EC number: 284-325-5	
M factor (Acute) = 10	M factor (Chronic) = 10	

Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302 Skin Corr. 1B - H314 Repr. 2 - H361fd Eye Dam. 1 - H318 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Repr. Cat. 3;R62,R63 C;R34 Xn;R22 N;R50/53

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments Epoxy resin blend.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Remove affected person from source of contamination.

Inhalation Move affected person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention immediately.

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Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.

Eye contact Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation May cause discomfort.

Ingestion May cause discomfort if swallowed.

Skin contact Skin irritation. May cause an allergic skin reaction.

Eye contact Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide or dry powder.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Toxic gases/vapours/fumes of: Oxides of the following substances: Carbon. Nitrogen.

Hazardous combustion products Oxides of carbon. Oxides of nitrogen.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Provide adequate ventilation. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Avoid contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses. Contain spillages with sand, earth or any suitable absorbent material.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with sand or other inert absorbent. Collect spillage in containers, seal securely and deliver for disposal as hazardous waste.

6.4. Reference to other sections

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Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Provide adequate ventilation. Good personal hygiene procedures should be implemented. Do not eat, drink or smoke when using the product.

Advice on general occupational hygiene Promptly remove any clothing that becomes contaminated. Wash contaminated clothing before reuse. Wash after use and before eating, smoking and using the toilet.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep separate from food, feedstuffs, fertilisers and other sensitive material. Store in closed original container at temperatures between 5°C and 30°C. Store in a cool and well-ventilated place.

7.3. Specific end use(s)

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

8.2. Exposure controls

Protective equipment

Appropriate engineering controls Provide adequate general and local exhaust ventilation.

Personal protection Always check applicability with your supplier of protective equipment.

Eye/face protection If there is a risk of splashing, wear chemical resistant goggles or visor approved to BS EN166.

Hand protection Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Nitrile gloves to BSEN374 are recommended. Break through times can vary depending on thickness, use and source. Change gloves regularly.

Other skin and body protection Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.

Hygiene measures Provide eyewash station. Promptly remove any clothing that becomes contaminated. Wash promptly with soap and water if skin becomes contaminated. Wash contaminated clothing before reuse.

Respiratory protection No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit.

Thermal hazards None

Environmental exposure controls Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

STYCCOBOND F84 RESIN

Appearance	Paste.
Colour	Brown.
Odour	Slight. Aromatic.
Odour threshold	Not determined.
pH	Not applicable.
Melting point	Not applicable.
Initial boiling point and range	Not determined.
Flash point	Not applicable.
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Other flammability	Not applicable.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	1.27 approx @ 20°C
Bulk density	Not determined.
Solubility(ies)	Insoluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not applicable.
Viscosity	40000-60000 approx cP @ 35°C
Explosive properties	Not applicable.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Not determined.
Comments	Information given is applicable to the product in its ready-to-use form.

9.2. Other information

Other information	None.
Refractive index	Not determined.
Particle size	Not applicable.
Molecular weight	Not determined.
Volatility	Not determined.
Saturation concentration	Not determined.
Critical temperature	Not determined.

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Volatile organic compound This product contains a maximum VOC content of 1 (when mixed with hardener) g/l.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The following materials may react with the product: Acids. Strong alkalis. Strong oxidising agents.

10.2. Chemical stability

Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Under normal conditions of storage and use, hazardous reactions will not occur. Considerable exothermic reaction can occur when mixed with epoxide hardeners.

10.4. Conditions to avoid

Conditions to avoid Avoid contact with acids and oxidising substances.

10.5. Incompatible materials

Materials to avoid Strong acids. Strong alkalis. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects No information available.

Acute toxicity - oral

Notes (oral LD_{50}) No specific test data are available.

Acute toxicity - dermal

Notes (dermal LD_{50}) No specific test data are available.

Acute toxicity - inhalation

Notes (inhalation LC_{50}) No specific test data are available.

Skin corrosion/irritation

Skin corrosion/irritation Irritating to skin.,Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.

Animal data No specific test data are available.

Human skin model test No specific test data are available.

Extreme pH No specific test data are available.

Serious eye damage/irritation

Serious eye damage/irritation Irritation of eyes is assumed.

Respiratory sensitisation

Respiratory sensitisation No specific test data are available.

Skin sensitisation

Skin sensitisation Sensitising.

Germ cell mutagenicity

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Genotoxicity - in vitro	No specific test data are available.
Genotoxicity - in vivo	No specific test data are available.

Carcinogenicity

Carcinogenicity	No specific test data are available.
Target organ for carcinogenicity	No specific target organs known.
IARC carcinogenicity	Not listed.

Reproductive toxicity

Reproductive toxicity - fertility	No specific test data are available.

Specific target organ toxicity - single exposure

STOT - single exposure	No specific test data are available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	No specific test data are available.

Aspiration hazard

Aspiration hazard	Not relevant.

General information	No specific health hazards known.
Inhalation	May cause some discomfort in poorly ventilated areas.
Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged or repeated exposure may cause severe irritation. May cause sensitisation by skin contact.
Eye contact	Irritating to eyes.
Acute and chronic health hazards	May cause allergic contact eczema.
Route of entry	Skin and/or eye contact
Target organs	Eyes Skin
Medical symptoms	Skin irritation. Irritation of eyes and mucous membranes.
Medical considerations	Pre-existing eye problems. Skin disorders and allergies.

Toxicological information on ingredients.

EPOXY RESIN (Number average MW <= 700)

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,000.0
Species	Rat

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rat

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BISPHENOL F EPOXY RESIN

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,000.0
Species	Rat

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rabbit

C13/15 ALKYLGLYCIDYL ETHER

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,000.0
Species	Rat

OXIRANE, MONO [(C12-14- ALKYLOXY)METHYL] DERIVS

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	17,100.0
Species	Rat

SECTION 12: Ecological Information

Ecotoxicity	The product should not be allowed to enter drains, sewers or watercourses. Toxic to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity	Not available
Acute toxicity - fish	Not determined
Acute toxicity - aquatic invertebrates	Not determined.
Acute toxicity - aquatic plants	Not determined.
Acute toxicity - microorganisms	Not determined.
Acute toxicity - terrestrial	Not determined.
Chronic toxicity - fish early life stage	Not determined.
Short term toxicity - embryo and sac fry stages	Not determined.
Chronic toxicity - aquatic invertebrates	Not determined.

Ecological information on ingredients.

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EPOXY RESIN (Number average MW <= 700)

Acute toxicity - fish	LC50, 96 hours, 96 hours: 1.3 mg/l, Onchorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours, 48 hours: 2.1 mg/l, Daphnia magna
Acute toxicity - aquatic plants	, 72 hours, 72 hours: > 11 mg/l, Freshwater algae
Acute toxicity - microorganisms	EC_{50}, 3 hours, 3 hours: > 100 mg/l, Activated sludge

BISPHENOL F EPOXY RESIN

Acute toxicity - fish	LC50, 96 hours, 96 hours: 2.54 mg/l, Freshwater fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours, 48 hours: 2.55 mg/l, Daphnia magna

OXIRANE, MONO [(C12-14- ALKYLOXY)METHYL] DERIVS

Acute toxicity - fish	LC50, 96 hours, 96 hours: > 1800 , Leuciscus idus (Golden orfe)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours, 48 hours: 844 mg/l, Daphnia magna
Acute toxicity - microorganisms	EC_{50}, >: > 100 mg/l, Activated sludge

4-NONYLPHENOL, Branched

Acute aquatic toxicity	
$LE(C)_{50}$	0.1 < L(E)C50 ≤ 1 0.01 < L(E)C50 ≤ 0.1
M factor (Acute)	10
Chronic aquatic toxicity	
M factor (Chronic)	10

12.2. Persistence and degradability

Persistence and degradability	There are no data on the degradability of this product.
Phototransformation	Not determined.
Stability (hydrolysis)	Not determined.
Biodegradation	Highly insoluble in water.
Biological oxygen demand	Not determined.
Chemical oxygen demand	Not determined.

12.3. Bioaccumulative potential

Bioaccumulative potential	No data available on bioaccumulation.
Partition coefficient	Not determined.

12.4. Mobility in soil

Mobility	The product is insoluble in water.

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Adsorption/desorption coefficient	Not determined.
Henry's law constant	Not determined.
Surface tension	Not determined.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects	None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods	Small quantities of product may be treated with an equivalent quantity of product hardener, allowed to cure and disposed of as low hazard waste. Large quantities should be disposed of via licensed waste operators to an approved incineration unit. Product containers must not be re-used without commercial cleaning.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	3082
UN No. (IMDG)	3082
UN No. (ICAO)	3082

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN (Number average MW <= 700), S0LVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC)
Proper shipping name (IMDG)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN (Number average MW <= 700), S0LVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC)
Proper shipping name (ICAO)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN (Number average MW <= 700), S0LVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC)
Proper shipping name (ADN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN (Number average MW <= 700), S0LVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC)

14.3. Transport hazard class(es)

ADR/RID class	9
ADR/RID label	9
IMDG class	9
ICAO class/division	9

Transport labels

14.4. Packing group

STYCCOBOND F84 RESIN

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user

EmS	F-A, S-F
Emergency Action Code	•3Z
Hazard Identification Number (ADR/RID)	90
Tunnel restriction code	(E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: Regulatory information

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

National regulations	Control of Substances Hazardous to Health Regulations 2002 (as amended).
Guidance	Workplace Exposure Limits EH40. Safety Data Sheets for Substances and Preparations.
Authorisations (Title VII Regulation 1907/2006)	No specific authorisations are known for this product.
Restrictions (Title VIII Regulation 1907/2006)	No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

General information	F.Ball and Company Ltd Technical Datasheet.
Key literature references and sources for data	Health and Safety Executive Guidance Note EH40 (amended annually). Workplace Exposure Limits.
Revision comments	Section 9: update. Section 11 update. Section 12 update.
Revision date	18/02/2016
Revision	15
Supersedes date	06/11/2015
SDS status	Approved.

STYCCOBOND F84 RESIN

Risk phrases in full

R10 Flammable.
R22 Harmful if swallowed.
R34 Causes burns.
R36/38 Irritating to eyes and skin.
R37 Irritating to respiratory system.
R38 Irritating to skin.
R43 May cause sensitisation by skin contact.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62 Possible risk of impaired fertility.
R63 Possible risk of harm to the unborn child.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

Hazard statements in full

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.