



## SAFETY DATA SHEET STYCCOBOND F84 HARDENER

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

#### 1.1. Product identifier

Product name	STYCCOBOND F84 HARDENER
Product number	F3248
Internal identification	SBF84H/13

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

Identified uses	Hardener.
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
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#### 1.4. Emergency telephone number

Emergency telephone	01538 361633 Mon-Fri 8.30am - 5.00pm (excluding Bank Holidays)
National emergency telephone number	UK - National Poisons Information Service Call 111 Ireland - National Poisons Information Centre Call +353 1 809 2166

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317
Environmental hazards	Aquatic Chronic 2 - H411
Human health	Risk of sensitisation by skin contact May cause serious eye damage.
Environmental	The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

#### 2.2. Label elements

## STYCCOBOND F84 HARDENER

### Hazard pictograms



### Signal word

Danger

### Hazard statements

H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H317 May cause an allergic skin reaction.  
 H411 Toxic to aquatic life with long lasting effects.

### Precautionary statements

P273 Avoid release to the environment.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
 P313 Get medical advice/ attention.  
 P501 Dispose of contents/ container in accordance with national regulations.

### Contains

TOFA REACTION PRODUCT WITH TEPA, TETRAETHYLENEPENTAMINE

### Supplementary precautionary statements

P264 Wash contaminated skin thoroughly after handling.

### 2.3. Other hazards

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>TOFA REACTION PRODUCT WITH TEPA</b>	<b>60-100%</b>
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CAS number: 68953-36-6

#### Classification

Eye Dam. 1 - H318  
 Skin Sens. 1 - H317  
 STOT SE 3 - H335  
 Aquatic Chronic 2 - H411

<b>TETRAETHYLENEPENTAMINE</b>	<b>1-5%</b>
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CAS number: 112-57-2                      EC number: 203-986-2

#### Classification

Acute Tox. 4 - H302  
 Acute Tox. 4 - H312  
 Skin Corr. 1B - H314  
 Skin Sens. 1 - H317  
 Aquatic Chronic 2 - H411

The full text for all hazard statements is displayed in Section 16.

**Composition comments**                      Epoxy hardener in organic solvent

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

## STYCCOBOND F84 HARDENER

<b>General information</b>	Remove affected person from source of contamination.
<b>Inhalation</b>	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention immediately.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.
<b>Eye contact</b>	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

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	This is unlikely to occur but symptoms similar to those of ingestion may develop.
<b>Ingestion</b>	May cause discomfort if swallowed.
<b>Skin contact</b>	Skin irritation. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye irritation.

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

<b>Notes for the doctor</b>	Treat symptomatically.
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## **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with foam, carbon dioxide or dry powder.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	Toxic gases/vapours/fumes of: Oxides of the following substances: Carbon. Nitrogen.
<b>Hazardous combustion products</b>	Oxides of carbon. Oxides of nitrogen.

### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	No specific firefighting precautions known.
<b>Special protective equipment for firefighters</b>	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

<b>Personal precautions</b>	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.
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### 6.2. Environmental precautions

<b>Environmental precautions</b>	Avoid the spillage or runoff entering drains, sewers or watercourses. Avoid discharge into drains or watercourses or onto the ground. Contain spillages with sand, earth or any suitable absorbent material.
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## STYCCOBOND F84 HARDENER

### 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

**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.

### 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

In case of inadequate ventilation use a respirator suitable for organic vapours. Consult respirator manufacturer for specific advice.

#### 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 HARDENER

<b>Appearance</b>	Liquid.
<b>Colour</b>	Amber.
<b>Odour</b>	Amine.
<b>Odour threshold</b>	Not determined.
<b>pH</b>	Not applicable.
<b>Melting point</b>	Not applicable.
<b>Initial boiling point and range</b>	>204°C @
<b>Flash point</b>	195°C Closed cup.
<b>Evaporation rate</b>	Not determined.
<b>Evaporation factor</b>	Not determined.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	Not applicable.
<b>Other flammability</b>	Not applicable.
<b>Vapour pressure</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Relative density</b>	0.95 Approx @ 20°C
<b>Bulk density</b>	Not determined.
<b>Solubility(ies)</b>	Insoluble in water.
<b>Partition coefficient</b>	Not determined.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition Temperature</b>	Not determined.
<b>Viscosity</b>	500 approx cP @ 25°C
<b>Explosive properties</b>	Not applicable.
<b>Explosive under the influence of a flame</b>	Not considered to be explosive.
<b>Oxidising properties</b>	Not determined.
<b>Comments</b>	Information given is applicable to the product in its ready-to-use form.
<b><u>9.2. Other information</u></b>	
<b>Other information</b>	None.
<b>Refractive index</b>	Not determined.
<b>Particle size</b>	Not applicable.
<b>Molecular weight</b>	Not determined.
<b>Volatility</b>	Not determined.
<b>Saturation concentration</b>	Not applicable.
<b>Critical temperature</b>	Not determined.

## STYCCOBOND F84 HARDENER

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

### 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.

#### 10.4. Conditions to avoid

**Conditions to avoid** Considerable exothermic reaction can occur when mixed with epoxide resins

#### 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<sub>50</sub>)** No specific test data are available.

**ATE oral (mg/kg)** 10,204.08

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** No specific test data are available.

**ATE dermal (mg/kg)** 22,448.98

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** No specific test data are available.

#### Skin corrosion/irritation

**Skin corrosion/irritation** Irritating to skin.

#### 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** Not determined.

#### Skin sensitisation

## STYCCOBOND F84 HARDENER

<b>Skin sensitisation</b>	Sensitising.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	No specific test data are available. Does not contain any substances known to be mutagenic.
<b>Genotoxicity - in vivo</b>	No specific test data are available. Does not contain any substances known to be mutagenic.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	No specific test data are available. Does not contain any substances known to be carcinogenic.
<b>IARC carcinogenicity</b>	Not listed.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	No specific test data are available. Does not contain any substances known to be toxic to reproduction.
<b>Reproductive toxicity - development</b>	Not considered to be toxic to the reproductive system.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	No specific test data are available. Not classified as a specific target organ toxicant after a single exposure.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	No specific test data are available. Not classified as a specific target organ toxicant after repeated exposure.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not relevant.
<b><u>General information</u></b>	
<b>Inhalation</b>	May cause some discomfort in poorly ventilated areas.
<b>Ingestion</b>	May cause discomfort if swallowed.
<b>Skin contact</b>	Prolonged or repeated exposure may cause severe irritation. May cause sensitisation by skin contact.
<b>Eye contact</b>	Causes serious eye damage.
<b>Acute and chronic health hazards</b>	Irritating to skin. Irritating to eyes. May cause sensitisation by skin contact.
<b>Route of exposure</b>	Skin and/or eye contact
<b>Target organs</b>	Eyes Skin
<b>Medical symptoms</b>	Skin irritation. Irritation of eyes and mucous membranes.
<b>Medical considerations</b>	Pre-existing eye problems. Skin disorders and allergies.

### SECTION 12: Ecological information

**Ecotoxicity** The product should not be allowed to enter drains, sewers or watercourses. The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

#### 12.1. Toxicity

**Toxicity** Toxic to aquatic life with long lasting effects.

## STYCCOBOND F84 HARDENER

### Acute aquatic toxicity

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 aquatic toxicity

Chronic toxicity - fish early life stage	Not determined.
Short term toxicity - embryo and sac fry stages	Not determined.
Chronic toxicity - aquatic invertebrates	Not determined.

### 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	Not determined.
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 has poor water-solubility.
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.
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### 12.6. Other adverse effects

Other adverse effects	None known.
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## **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods



## STYCCOBOND F84 HARDENER

### Disposal methods

Small quantities may be treated with an equivalent quantity of product resin, allowed to cure and disposed of as low hazard waste. Larger quantities should be disposed of as hazardous waste via a licensed waste operator. 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
UN No. (ADN)	3082

#### 14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS TOFA REACTION PRODUCT WITH TEPA, TETRAETHYLENEPENTAMINE)
Proper shipping name (IMDG)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS TOFA REACTION PRODUCT WITH TEPA, TETRAETHYLENEPENTAMINE)
Proper shipping name (ICAO)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS TOFA REACTION PRODUCT WITH TEPA, TETRAETHYLENEPENTAMINE)
Proper shipping name (ADN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS TOFA REACTION PRODUCT WITH TEPA, TETRAETHYLENEPENTAMINE)

#### 14.3. Transport hazard class(es)

ADR/RID class	9
ADR/RID classification code	M6
ADR/RID label	9
IMDG class	9
ICAO class/division	9
ADN class	9

#### Transport labels



#### 14.4. Packing group

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

#### 14.5. Environmental hazards

## STYCCOBOND F84 HARDENER

Environmentally hazardous substance/marine pollutant



### 14.6. Special precautions for user

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

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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

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 (Annex XIV Regulation 1907/2006)	No specific authorisations are known for this product.
Restrictions (Annex XVII 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	Revised classification.
Revision date	10/08/2018
Revision	13
Supersedes date	14/09/2016
SDS status	Approved.

## STYCCOBOND F84 HARDENER

### Hazard statements in full

H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.  
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.