SAFETY DATA SHEET
Stopgap SRS Hardener

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

1.1. Product identifier

Product name Stopgap SRS Hardener

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

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 Acute Tox. 4 - H302 Skin Corr. 1B - H314 Skin Sens. 1 - H317

Environmental hazards Aquatic Chronic 2 - H411

Classification (67/548/EEC or 1999/45/EC) Xn; R22. C; R34. N; R51/53. R43

Human health The product contains a sensitising substance. May cause sensitisation or allergic reactions in sensitive individuals. This product can cause burns,

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

Pictogram

Stopgap SRS Hardener

Signal word	Danger
Hazard statements	H302 Harmful if swallowed. H314 Causes severe skin burns and 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. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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	PHENOL, STYRENATED, M-PHENYLENEBIS(METHYLAMINE), PHENOL, METHYLSTYRENATED, SALICYLIC ACID
Supplementary precautionary statements	P264 Wash contaminated skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P405 Store locked up. P501 Dispose of contents/container in accordance with national regulations.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

PHENOL, STYRENATED **30-60%**

CAS number: 61788-44-1 EC number: 262-975-0

Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411	Xi;R38. N;R51/53. R43.

M-PHENYLENEBIS(METHYLAMINE) **10-30%**

CAS number: 1477-55-0 EC number: 216-032-5 REACH registration number: 01-2119480150-50-0000

Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Corr. 1B - H314 Skin Sens. 1 - H317 Eye Dam. 1 - H318 Aquatic Chronic 3 - H412	Xn;R20/22. C;R34. R43,R52/53.

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TRIMETHYL HEXAMETHYLENE DIAMINE		10-30%
CAS number: 25513-64-8	EC number: 247-063-2	

Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302 Skin Corr. 1A - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Aquatic Chronic 3 - H412	Xn;R22. C;R35. R43,R52/53.

PHENOL, METHYLSTYRENATED		10-30%
CAS number: 68512-30-1	REACH registration number: 01-2119555274-38-0001	

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

SALICYLIC ACID		1-5%
CAS number: 69-72-7	EC number: 200-712-3	

Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302 Acute Tox. 4 - H312 Eye Dam. 1 - H318	Xn;R20/21/22. Xi;R37/38,R41.

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

Composition comments Amine curing agent

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.

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 Harmful if swallowed.

Skin contact May cause serious chemical burns to the skin. May cause skin irritation/eczema.

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Eye contact Severe irritation, burning and tearing.

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. No unusual fire or explosion hazards noted.

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 Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Avoid inhalation of vapours and contact with skin and eyes. Evacuate non-essential personnel from the spill area. Use suitable respiratory protection if ventilation is inadequate.

6.2. Environmental precautions

Environmental precautions 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.

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 Good personal hygiene procedures should be implemented. Do not eat, drink or smoke when using the product. Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist. Avoid inhalation of vapours/spray and contact with skin and eyes. Provide adequate ventilation. Use approved respirator if air contamination is above an acceptable level.

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

Ingredient comments Due to the hazardous nature of ingredients, exposure should be minimal.

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 The following protection should be worn: Chemical splash goggles.

Hand protection It is recommended that chemical-resistant, impervious gloves are worn. 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

Appearance Liquid.

Colour Yellow.

Odour Amine.

Odour threshold Not determined.

pH Not determined.

Melting point Not applicable.

Initial boiling point and range >200°C @

Flash point > 100°C

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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	4 hPa @ °C
Vapour density	Not determined.
Relative density	1.038 @ 23°C
Bulk density	Not determined.
Solubility(ies)	Immiscible with water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not determined.
Viscosity	240 mPa s @ 25°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 applicable.
Critical temperature	Not determined.
Volatile organic compound	Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stability	Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

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Possibility of hazardous reactions Under normal conditions of storage and use, hazardous reactions will not occur. No potentially hazardous reactions known.

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_{50}) No specific test data are available.

ATE oral (mg/kg) 1,851.85

Acute toxicity - dermal

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

ATE dermal (mg/kg) 12,222.22

Acute toxicity - inhalation

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

ATE inhalation (vapours mg/l) 40.74

Skin corrosion/irritation

Skin corrosion/irritation Corrosive to skin.,Causes severe burns.

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 Corrosivity to eyes is assumed.

Respiratory sensitisation

Respiratory sensitisation No specific test data are available.

Skin sensitisation

Skin sensitisation No specific test data are available.

Germ cell mutagenicity

Genotoxicity - in vitro Does not contain any substances known to be mutagenic.

Genotoxicity - in vivo Does not contain any substances known to be mutagenic.

Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

IARC carcinogenicity Not listed.

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Reproductive toxicity

Reproductive toxicity - fertility	Does not contain any substances known to be toxic to reproduction.
Reproductive toxicity - development	Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard	Not relevant.

Inhalation	Vapours may irritate throat/respiratory system.
Ingestion	Harmful if swallowed. May cause chemical burns in mouth, oesophagus and stomach.
Skin contact	Causes burns. May cause sensitisation by skin contact.
Eye contact	May cause chemical eye burns.
Acute and chronic health hazards	This product is corrosive. This product may cause skin and eye irritation. Prolonged contact may cause burns.
Route of entry	Skin and/or eye contact
Target organs	Eyes Skin
Medical symptoms	Prolonged or repeated exposure may cause the following adverse effects: Allergic rash. Chemical burns.
Medical considerations	Skin disorders and allergies. Splash in eye requires examination by eye specialist.

Toxicological information on ingredients.

M-PHENYLENEBIS(METHYLAMINE)

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	930.0
Species	Rat

Acute toxicity - dermal

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

Acute toxicity - inhalation

ATE inhalation (vapours mg/l)	3.0

TRIMETHYL HEXAMETHYLENE DIAMINE

Acute toxicity - oral

ATE oral (mg/kg)	500.0

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SALICYLIC ACID

Acute toxicity - oral

ATE oral (mg/kg)	500.0

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 measured. Do not allow to enter waterways or drains
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.

M-PHENYLENEBIS(METHYLAMINE)

Acute toxicity - fish	LC50, 96 hours, 96 hours: > 100 mg/l, Onchorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours, 48 hours: 16 mg/l, Daphnia magna

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

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Mobility	The product is non-volatile.
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	Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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)	2735
UN No. (IMDG)	2735
UN No. (ICAO)	2735

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	AMINES, LIQUID, CORROSIVE, N.O.S. (NONYLPHENOL, DIETHYLENETRIAMINE)
Proper shipping name (IMDG)	AMINES, LIQUID, CORROSIVE, N.O.S. (NONYLPHENOL, DIETHYLENETRIAMINE)
Proper shipping name (ICAO)	AMINES, LIQUID, CORROSIVE, N.O.S. (NONYLPHENOL, DIETHYLENETRIAMINE)
Proper shipping name (ADN)	AMINES, LIQUID, CORROSIVE, N.O.S. (NONYLPHENOL, DIETHYLENETRIAMINE)

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID label	8
IMDG class	8
ICAO class/division	8

Transport labels

14.4. Packing group

ADR/RID packing group	III

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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-B
Emergency Action Code	2X
Hazard Identification Number (ADR/RID)	80
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	This is first issue.
Revision date	16/02/2016
Revision	1
SDS number	20697
SDS status	Approved.
Risk phrases in full	R34 Causes burns. R43 May cause sensitisation by skin contact. 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.

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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.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful 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.