



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)

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

Environmental hazards Aquatic Chronic 2 - H411

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

Hazard pictograms



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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 or 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	REACH registration number: 01-2119980970-27-0000
Classification		
Skin Irrit. 2 - H315		
Skin Sens. 1 - H317		
Aquatic Chronic 2 - H411		
PHENOL, METHYLSTYRENATED		10-30%
CAS number: 68512-30-1	EC number: 270-966-8	REACH registration number: 01-2119555274-38-0001
Classification		
Acute Tox. 4 - H312		
Skin Irrit. 2 - H315		
Skin Sens. 1 - H317		
Aquatic Chronic 3 - H412		

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TRIMETHYL HEXAMETHYLENE DIAMINE			10-30%
CAS number: 25513-64-8	EC number: 247-063-2	REACH registration number: 01-2119560598-25-0000	
Classification			
Acute Tox. 4 - H302			
Skin Corr. 1A - H314			
Skin Sens. 1 - H317			
Aquatic Chronic 3 - H412			
M-PHENYLENEBIS(METHYLAMINE)			10-30%
CAS number: 1477-55-0	EC number: 216-032-5	REACH registration number: 01-2119480150-50-0000	
Classification			
Acute Tox. 4 - H302			
Acute Tox. 3 - H331			
Skin Corr. 1B - H314			
Skin Sens. 1 - H317			
Aquatic Chronic 3 - H412			
SALICYLIC ACID			1-5%
CAS number: 69-72-7	EC number: 200-712-3	REACH registration number: 01-2119486984-17-0000	
Classification			
Acute Tox. 4 - H302			
Eye Dam. 1 - H318			
Repr. 2 - H361			

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

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.

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

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.

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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.

M-PHENYLENEBIS(METHYLAMINE) (CAS: 1477-55-0)

PNEC - Fresh water; 0.094 mg/l
- marine water; 0.0094 mg/l

PHENOL, METHYLSTYRENATED (CAS: 68512-30-1)

DNEL Workers - Dermal; : 16.4 mg/kg/day
Workers - Inhalation; : 57 mg/m³

PNEC - Fresh water; 0.014 mg/l
- marine water; 0.0014 mg/l

TRIMETHYL HEXAMETHYLENE DIAMINE (CAS: 25513-64-8)

PNEC - Fresh water; 0.0295 mg/l
- marine water; 0.00295 mg/l

SALICYLIC ACID (CAS: 69-72-7)

DNEL Workers - Dermal; : 2 mg/kg/day

PNEC - Fresh water; 0.2 mg/l
- marine water; 0.02 mg/l

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.

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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
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

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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

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 LD₅₀) No specific test data are available.

ATE oral (mg/kg) 1,851.85

Acute toxicity - dermal

Notes (dermal LD₅₀) No specific test data are available.

ATE dermal (mg/kg) 12,222.22

Acute toxicity - inhalation

Notes (inhalation LC₅₀) 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.

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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.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Corrosivity to eyes is assumed.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No specific test data are available.
<u>Skin sensitisation</u>	
Skin sensitisation	No specific test data are available.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Does not contain any substances known to be mutagenic.
Genotoxicity - in vivo	Does not contain any substances known to be mutagenic.
<u>Carcinogenicity</u>	
Carcinogenicity	Does not contain any substances known to be carcinogenic.
IARC carcinogenicity	Not listed.
<u>Reproductive toxicity</u>	
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.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant.
<u>Inhalation</u>	
Inhalation	Vapours may irritate throat/respiratory system.
<u>Ingestion</u>	
Ingestion	Harmful if swallowed. May cause chemical burns in mouth, oesophagus and stomach.
<u>Skin contact</u>	
Skin contact	Causes burns. May cause sensitisation by skin contact.
<u>Eye contact</u>	
Eye contact	May cause chemical eye burns.
<u>Acute and chronic health hazards</u>	
Acute and chronic health hazards	This product is corrosive. This product may cause skin and eye irritation. Prolonged contact may cause burns.
<u>Route of exposure</u>	
Route of exposure	Skin and/or eye contact
<u>Target organs</u>	
Target organs	Eyes Skin
<u>Medical symptoms</u>	
Medical symptoms	Prolonged or repeated exposure may cause the following adverse effects: Allergic rash. Chemical burns.
<u>Medical considerations</u>	
Medical considerations	Skin disorders and allergies. Splash in eye requires examination by eye specialist.
<u>Toxicological information on ingredients.</u>	

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PHENOL, STYRENATED

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rat

PHENOL, METHYLSTYRENATED

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 3600 mg/kg, Oral, Rabbit LD₅₀ > 2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ 2000 mg/kg, Dermal, Rabbit LD₅₀ > 2000 mg/kg, Dermal, Rat

ATE dermal (mg/kg) 1,100.0

TRIMETHYL HEXAMETHYLENE DIAMINE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 910 mg/kg, Oral, Rat

ATE oral (mg/kg) 500.0

M-PHENYLENEBIS(METHYLAMINE)

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 930.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.0

Species Rabbit

Notes (dermal LD₅₀) LD₅₀ 3100 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 3.0

SALICYLIC ACID

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 891 mg/kg, Oral, Rat

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rat

SECTION 12: Ecological information

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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 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.

Ecological information on ingredients.

PHENOL, STYRENATED

Acute aquatic toxicity

Acute toxicity - fish LL₅₀, 96 hours: 14.8 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 1 - 10 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 3.14 mg/l, Scenedesmus subspicatus

PHENOL, METHYLSTYRENATED

Acute aquatic toxicity

Acute toxicity - fish LL₅₀, 96 hours: 25.8 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: < 51 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 15 mg/l, Scenedesmus subspicatus

TRIMETHYL HEXAMETHYLENE DIAMINE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 48 hours: 174 mg/l, Leuciscus idus (Golden orfe)

Acute toxicity - aquatic invertebrates EC₅₀, 24 hours: 31.5 mg/l, Daphnia magna

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Acute toxicity - aquatic plants EC₅₀, 72 hours: 29.5 mg/l, Scenedesmus subspicatus

Acute toxicity - microorganisms EC₅₀, 17 hours: 89 mg/l, Activated sludge

M-PHENYLENEBIS(METHYLAMINE)

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: > 100 mg/l, Oncorhynchus mykiss (Rainbow trout)
LC₅₀, 96 hours: > 100 mg/l, Brachydanio rerio (Zebra Fish)
LC₅₀, 96 hours: 87.6 mg/l, Oryzias latipes (Red killifish)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 15.2 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 20.3 mg/l, Selenastrum capricornutum

SALICYLIC ACID

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 1380 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 870 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: > 100 mg/l, Desmodesmus subspicatus

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 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.

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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
IMDG packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

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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 MARPOL 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 (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	SDS Updated
Revision date	06/11/2019
Revision	2
Supersedes date	16/02/2016
SDS number	20697
SDS status	Approved.
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. H331 Toxic if inhaled. H361 Suspected of damaging fertility or the unborn child. 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.