


**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

- 1.1 Product identifier:** STOPGAP F77 HARDENER
Other means of identification:
Non-applicable
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant uses: Floor coating.. For professional users only.
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:**
F. Ball and Co. Ltd.
Churnetside Business Park, Station Road
ST13 7RS Cheddleton - Leek - England
Phone: +44(0) 1538 361633
msds@f-ball.co.uk
www.f-ball.com
- 1.4 Emergency telephone number:** 111

SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
GB CLP Regulation:
Classification of this product has been carried out in accordance with GB CLP Regulation.
Acute Tox. 4: Acute toxicity if swallowed, Category 4, H302
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411
Skin Corr. 1B: Skin corrosion, Category 1B, H314
Skin Sens. 1A: Sensitisation, skin, Category 1A, H317
- 2.2 Label elements:**
GB CLP Regulation:
Danger
- 
- Hazard statements:**
Acute Tox. 4: H302 - Harmful if swallowed.
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
Skin Sens. 1A: H317 - May cause an allergic skin reaction.
- Precautionary statements:**
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection.
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313: IF exposed or concerned: Get medical advice/attention.
- Supplementary information:**
EUH071: Corrosive to the respiratory tract.
Contains 3-aminomethyl-3,5,5-trimethylcyclohexylamine, Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine, Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine, m-phenylenebis(methylamine), N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine.
- 2.3 Other hazards:**
Product does not meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substance:**

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Non-applicable

3.2 Mixture:

Chemical description: Mixture composed of organic substances

Components:

In accordance with Annex II of The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 100-51-6	benzyl alcohol Acute Tox. 4: H302+H332 - Warning	10 - <30 %
CAS: 68082-29-1	Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine Aquatic Chronic 2: H411; Eye Dam. 1: H318; Skin Irrit. 2: H315; Skin Sens. 1A: H317 - Danger	10 - <30 %
CAS: 90-72-2	2,4,6-tris(dimethylaminomethyl)phenol Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning	10 - <30 %
CAS: 186321-96-0	Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Dam. 1: H318; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Danger	10 - <30 %
CAS: 1477-55-0	m-phenylenebis(methylamine) Acute Tox. 4: H302+H332; Aquatic Chronic 3: H412; Eye Dam. 1: H318; Skin Corr. 1B: H314; Skin Sens. 1B: H317; EUH071 - Danger	2.5 - <10 %
CAS: 2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine Acute Tox. 4: H302; Eye Dam. 1: H318; Skin Corr. 1B: H314; Skin Sens. 1A: H317 - Danger	2.5 - <10 %
CAS: 10563-29-8	N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine Acute Tox. 4: H302; Eye Dam. 1: H318; Skin Corr. 1A: H314; Skin Sens. 1B: H317 - Danger	2.5 - <10 %
CAS: 69-72-7	Salicylic acid Acute Tox. 4: H302; Eye Dam. 1: H318; Repr. 2: H361d - Danger	<1 %

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
benzyl alcohol CAS: 100-51-6	LD50 oral	Non-applicable	
	LD50 dermal	Non-applicable	
	LC50 inhalation	11 mg/L (ATEi)	
m-phenylenebis(methylamine) CAS: 1477-55-0	LD50 oral	Non-applicable	
	LD50 dermal	Non-applicable	
	LC50 inhalation	11 mg/L (ATEi)	
3-aminomethyl-3,5,5-trimethylcyclohexylamine CAS: 2855-13-2	LD50 oral	1030 mg/kg (ATEi)	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

Request medical assistance immediately, showing the SDS of this product.

By inhalation:

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

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**SECTION 4: FIRST AID MEASURES (continued)**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Keep the person affected at rest.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Non-applicable

SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing media:****Suitable extinguishing media:**

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

Non-applicable

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...).

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures:****For non-emergency personnel:**

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.:	5 °C
Maximum Temp.:	30 °C
Maximum time:	6 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace:

There are no applicable occupational exposure limits for the substances contained in the product

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	40 mg/kg	Non-applicable	8 mg/kg	Non-applicable
	Inhalation	110 mg/m ³	Non-applicable	22 mg/m ³	Non-applicable
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine CAS: 68082-29-1 EC: 500-191-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1.1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	3.9 mg/m ³	Non-applicable
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0.15 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0.53 mg/m ³	Non-applicable
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine CAS: 186321-96-0 EC: 606-078-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	7.05 mg/m ³	Non-applicable
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0.33 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1.2 mg/m ³	0.2 mg/m ³

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
3-aminomethyl-3,5,5-trimethylcyclohexylamine CAS: 2855-13-2 EC: 220-666-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	0.073 mg/m ³
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine CAS: 10563-29-8 EC: 234-148-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0.67 mg/kg	Non-applicable
	Inhalation	7.5 mg/m ³	7.5 mg/m ³	3.7 mg/m ³	3.7 mg/m ³
Salicylic acid CAS: 69-72-7 EC: 200-712-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	2.3 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	5 mg/m ³	5 mg/m ³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	Oral	20 mg/kg	Non-applicable	4 mg/kg	Non-applicable
	Dermal	20 mg/kg	Non-applicable	4 mg/kg	Non-applicable
	Inhalation	27 mg/m ³	Non-applicable	5.4 mg/m ³	Non-applicable
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine CAS: 68082-29-1 EC: 500-191-5	Oral	Non-applicable	Non-applicable	0.56 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0.56 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0.97 mg/m ³	Non-applicable
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	Oral	Non-applicable	Non-applicable	0.075 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0.075 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0.13 mg/m ³	Non-applicable
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine CAS: 186321-96-0 EC: 606-078-8	Oral	Non-applicable	Non-applicable	0.5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0.5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1.74 mg/m ³	Non-applicable
3-aminomethyl-3,5,5-trimethylcyclohexylamine CAS: 2855-13-2 EC: 220-666-8	Oral	Non-applicable	Non-applicable	0.526 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	Non-applicable
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine CAS: 10563-29-8 EC: 234-148-4	Oral	Non-applicable	Non-applicable	0.2 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0.65 mg/m ³	0.65 mg/m ³
Salicylic acid CAS: 69-72-7 EC: 200-712-3	Oral	4 mg/kg	Non-applicable	1 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	4 mg/m ³	Non-applicable

PNEC:

Identification				
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	STP	39 mg/L	Fresh water	1 mg/L
	Soil	0.456 mg/kg	Marine water	0.1 mg/L
	Intermittent	2.3 mg/L	Sediment (Fresh water)	5.27 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.527 mg/kg
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine CAS: 68082-29-1 EC: 500-191-5	STP	3.84 mg/L	Fresh water	0.004 mg/L
	Soil	86.78 mg/kg	Marine water	0 mg/L
	Intermittent	0.043 mg/L	Sediment (Fresh water)	434.02 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	43.4 mg/kg
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	STP	0.2 mg/L	Fresh water	0.046 mg/L
	Soil	0.025 mg/kg	Marine water	0.005 mg/L
	Intermittent	0.46 mg/L	Sediment (Fresh water)	0.262 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.026 mg/kg

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)


Identification				
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine CAS: 186321-96-0 EC: 606-078-8	STP	1.58 mg/L	Fresh water	0.000186 mg/L
	Soil	11.1 mg/kg	Marine water	0.000019 mg/L
	Intermittent	0.00186 mg/L	Sediment (Fresh water)	0.005 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.0005 mg/kg
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	STP	10 mg/L	Fresh water	0.094 mg/L
	Soil	2.44 mg/kg	Marine water	0.009 mg/L
	Intermittent	0.152 mg/L	Sediment (Fresh water)	12.4 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	1.24 mg/kg
3-aminomethyl-3,5,5-trimethylcyclohexylamine CAS: 2855-13-2 EC: 220-666-8	STP	3.18 mg/L	Fresh water	0.06 mg/L
	Soil	1.121 mg/kg	Marine water	0.006 mg/L
	Intermittent	0.23 mg/L	Sediment (Fresh water)	5.784 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.578 mg/kg
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine CAS: 10563-29-8 EC: 234-148-4	STP	18.1 mg/L	Fresh water	0.0092 mg/L
	Soil	0.00132 mg/kg	Marine water	0.00092 mg/L
	Intermittent	0.092 mg/L	Sediment (Fresh water)	0.034 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.00336 mg/kg
Salicylic acid CAS: 69-72-7 EC: 200-712-3	STP	162 mg/L	Fresh water	0.2 mg/L
	Soil	0.166 mg/kg	Marine water	0.02 mg/L
	Intermittent	1 mg/L	Sediment (Fresh water)	1.42 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.142 mg/kg

8.2 Exposure controls:


A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<UKCA marking>>. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection


Pictogram	PPE	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

Pictogram	PPE	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Butyl, Breakthrough time: > 480 min)	Replace the gloves at any sign of deterioration.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Eye and face protection

Pictogram	PPE	Remarks
 Mandatory face protection	Face shield	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

The Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2012:

V.O.C. (Supply):	31.47 % weight
V.O.C. density at 20 °C:	312.73 kg/m ³ (312.73 g/L)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Not available
Colour:	Not available
Odour:	Not available
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	220 °C
Vapour pressure at 20 °C:	5 Pa
Vapour pressure at 50 °C:	64.75 Pa (0.06 kPa)
Evaporation rate at 20 °C:	Non-applicable *

Product description:

Density at 20 °C:	993.9 kg/m ³
Relative density at 20 °C:	0.994
Dynamic viscosity at 20 °C:	380.16 cP
Kinematic viscosity at 20 °C:	382.51 mm ² /s
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Flammability:	
Flash Point:	Non Flammable (>60 °C)
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	300 °C
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

Particle characteristics:

Median equivalent diameter:	Non-applicable
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9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *
Aerosols-total percentage (by mass) of flammable components:	Non-applicable *

Other safety characteristics:

Surface tension at 20 °C:	Non-applicable *
Refraction index:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Precaution	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

Contains substances which require external energy for spontaneous decomposition. Form explosive peroxides when distilled, evaporated or otherwise concentrated.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
- Contact with the eyes: Produces serious eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
IARC: Non-applicable
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
benzyl alcohol CAS: 100-51-6	LD50 oral	500 mg/kg	Rat
	LD50 dermal	2500 mg/kg	
	LC50 inhalation	11 mg/L (ATEI)	
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine CAS: 68082-29-1	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L	

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine CAS: 186321-96-0	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L	
m-phenylenebis(methylamine) CAS: 1477-55-0	LD50 oral	1090 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	11 mg/L (ATEi)	
3-aminomethyl-3,5,5-trimethylcyclohexylamine CAS: 2855-13-2	LD50 oral	1030 mg/kg (ATEi)	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L	
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2	LD50 oral	1200 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L	
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine CAS: 10563-29-8	LD50 oral	1668 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L	
Salicylic acid CAS: 69-72-7	LD50 oral	891 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>5 mg/L	

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

Acute toxicity:

Identification	Concentration	Species	Genus
benzyl alcohol CAS: 100-51-6	LC50 646 mg/L (48 h)	Leuciscus idus	Fish
	EC50 400 mg/L (24 h)	Daphnia magna	Crustacean
	EC50 79 mg/L (3 h)	Scenedesmus subspicatus	Algae
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine CAS: 68082-29-1	LC50 7 mg/L (96 h)	Danio rerio	Fish
	EC50 7 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 4 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2	LC50 345 mg/L (96 h)	QSAR	Fish
	EC50 Non-applicable		
	EC50 Non-applicable		
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine CAS: 186321-96-0	LC50 1.8 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50 0.7 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 0.77 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae
m-phenylenebis(methylamine) CAS: 1477-55-0	LC50 88 mg/L (96 h)	Oryzias latipes	Fish
	EC50 15 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 20 mg/L (72 h)	Selenastrum capricornutum	Algae
3-aminomethyl-3,5,5-trimethylcyclohexylamine CAS: 2855-13-2	LC50 110 mg/L (96 h)	Leuciscus idus	Fish
	EC50 388 mg/L (48 h)	N/A	Crustacean
	EC50 Non-applicable		
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine CAS: 10563-29-8	LC50 Non-applicable		
	EC50 9.2 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 Non-applicable		

Chronic toxicity:

Identification	Concentration	Species	Genus
benzyl alcohol CAS: 100-51-6	NOEC 48.897 mg/L	N/A	Fish
	NOEC 51 mg/L	Daphnia magna	Crustacean

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration		Species	Genus
	NOEC	Concentration		
m-phenylenebis(methylamine) CAS: 1477-55-0	NOEC	Non-applicable		
	NOEC	4.7 mg/L	Daphnia magna	Crustacean
3-aminomethyl-3,5,5-trimethylcyclohexylamine CAS: 2855-13-2	NOEC	Non-applicable		
	NOEC	3 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
	Parameter	Value	Parameter	Value
benzyl alcohol CAS: 100-51-6	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	94 %
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine CAS: 186321-96-0	BOD5	Non-applicable	Concentration	2 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	9 %
m-phenylenebis(methylamine) CAS: 1477-55-0	BOD5	Non-applicable	Concentration	14 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	49 %
3-aminomethyl-3,5,5-trimethylcyclohexylamine CAS: 2855-13-2	BOD5	Non-applicable	Concentration	7 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	8 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
	Parameter	Value
benzyl alcohol CAS: 100-51-6	BCF	0.3
	Pow Log	1.1
	Potential	Low
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine CAS: 68082-29-1	BCF	77
	Pow Log	
	Potential	Moderate
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2	BCF	3
	Pow Log	0.77
	Potential	Low
m-phenylenebis(methylamine) CAS: 1477-55-0	BCF	3
	Pow Log	0.18
	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
	Parameter	Value	Parameter	Value
benzyl alcohol CAS: 100-51-6	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	3.679E-2 N/m (25 °C)	Moist soil	Non-applicable
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2	Koc	15130	Henry	9.312E-12 Pa·m ³ /mol
	Conclusion	Immobile	Dry soil	No
	Surface tension	Non-applicable	Moist soil	No
m-phenylenebis(methylamine) CAS: 1477-55-0	Koc	1300	Henry	Non-applicable
	Conclusion	Low	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable
3-aminomethyl-3,5,5-trimethylcyclohexylamine CAS: 2855-13-2	Koc	928	Henry	4.46E-4 Pa·m ³ /mol
	Conclusion	Low	Dry soil	No
	Surface tension	Non-applicable	Moist soil	No

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Absorption/desorption		Volatility	
Salicylic acid CAS: 69-72-7	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2.444E-2 N/m (207.25 °C)	Moist soil	Non-applicable

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class
16 03 05*	organic wastes containing hazardous substances	Dangerous

Type of waste:

HP14 Ecotoxic, HP6 Acute Toxicity, HP13 Sensitising, HP8 Corrosive

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance The Waste Regulations 2011, 2011 No. 988. As under 15 01 of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of UK REACH the provisions related to waste management are stated:

UK legislation: The Waste Regulations 2011.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2023 and RID 2023:



14.1 UN number:

UN2735

14.2 UN proper shipping name:

AMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-tris (dimethylaminomethyl)phenol); Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine)

14.3 Transport hazard class(es):

8

Labels:

8

14.4 Packing group:

II

14.5 Environmental hazards:

Yes

14.6 Special precautions for user

Tunnel restriction code:

E

Physico-Chemical properties:

see section 9

Limited quantities:

1 L

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:

Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:



SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number:** UN2735
- 14.2 UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-tris (dimethylaminomethyl)phenol; Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine)
- 14.3 Transport hazard class(es):** 8
Labels: 8
- 14.4 Packing group:** II
- 14.5 Marine pollutant:** Yes
- 14.6 Special precautions for user**
Special regulations: 274
EmS Codes: F-A, S-B
Physico-Chemical properties: see section 9
Limited quantities: 1 L
Segregation group: SGG18
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:



- 14.1 UN number:** UN2735
- 14.2 UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-tris (dimethylaminomethyl)phenol; Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine)
- 14.3 Transport hazard class(es):** 8
Labels: 8
- 14.4 Packing group:** II
- 14.5 Environmental hazards:** Yes
- 14.6 Special precautions for user**
Physico-Chemical properties: see section 9
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

SECTION 15: REGULATORY INFORMATION

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

- Substances listed in UK candidate list of substances of very high concern (SVHCs): Non-applicable
- Substances listed in UK REACH Authorisation List (Annex 14): Non-applicable

The Control of Major Accident Hazards Regulations 2015:

Section	Description	Lower-tier requirements	Upper-tier requirements
E2	ENVIRONMENTAL HAZARDS	200	500

Restrictions to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII UK REACH, etc):

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

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**SECTION 15: REGULATORY INFORMATION (continued)**

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020.
Control of Substances Hazardous to Health Regulations 2002 (as amended)
EH40/2005 Workplace exposure limits.

SECTION 16: OTHER INFORMATION**Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with ANNEX II-The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.

Texts of the legislative phrases mentioned in section 2:

H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H411: Toxic to aquatic life with long lasting effects.
H317: May cause an allergic skin reaction.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

GB CLP Regulation:

Acute Tox. 4: H302 - Harmful if swallowed.
Acute Tox. 4: H302+H332 - Harmful if swallowed or if inhaled.
Aquatic Acute 1: H400 - Very toxic to aquatic life.
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
Eye Dam. 1: H318 - Causes serious eye damage.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Repr. 2: H361d - Suspected of damaging the unborn child.
Skin Corr. 1A: H314 - Causes severe skin burns and eye damage.
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
Skin Sens. 1A: H317 - May cause an allergic skin reaction.
Skin Sens. 1B: H317 - May cause an allergic skin reaction.

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>
<http://eur-lex.europa.eu>

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at UK, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -