STYCCOBOND F81 HARDENER

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

1.1 Product identifier: STYCCOBOND F81 HARDENER

Other means of identification:

Non-applicable

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

Relevant uses: Adhesive. 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.

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411
Eye Dam. 1: Serious eye damage, Category 1, H318
Skin Irrit. 2: Skin irritation, Category 2, H315
Skin Sens. 1: Sensitisation, skin, Category 1, H317

2.2 Label elements:

GB CLP Regulation:

Danger

Hazard statements:

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Eye Dam. 1: H318 - Causes serious eye damage.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.

Precautionary statements:

P264: Wash thoroughly after use.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313: Get medical advice/attention.
P501: Dispose of the contents and/or its container in line with regulations on dangerous waste or packaging and waste packaging respectively.

Supplementary information:

Contains 2-piperazin-1-ylethylamine, Fatty acids, tall-oil, reaction products with tetraethylenepentamine, Tetraethylenepentamine.

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 of polymers, dispersants and organic compounds

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: 68683-29-4	**2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl] amino]butyl-terminated** Aquatic Chronic 4: H413	**50 - <75 %**
CAS: 68953-36-6	**Fatty acids, tall-oil, reaction products with tetraethylenepentamine** Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT SE 3: H335 - Warning	**25 - <50 %**
CAS: 90-72-2	**2,4,6-tris(dimethylaminomethyl)phenol** Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning	**2.5 - <10 %**
CAS: 112-57-2	**Tetraethylenepentamine** Acute Tox. 4: H302+H312; Aquatic Chronic 2: H411; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger	**1 - <2.5 %**
CAS: 140-31-8	**2-piperazin-1-ylethylamine** Acute Tox. 4: H302+H312; Aquatic Chronic 3: H412; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger	**<1 %**

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

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, 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:

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:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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.

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SECTION 5: FIREFIGHTING MEASURES (continued)

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.

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 ºC
Maximum Temp.:	30 ºC

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SECTION 7: HANDLING AND STORAGE (continued)

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):

		Short exposure		Long exposure	
Identification		Systemic	Local	Systemic	Local
2,4,6-tris(dimethylaminomethyl)phenol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 90-72-2	Dermal	Non-applicable	Non-applicable	0.15 mg/kg	Non-applicable
EC: 202-013-9	Inhalation	Non-applicable	Non-applicable	0.53 mg/m³	Non-applicable
2-piperazin-1-ylethylamine	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 140-31-8	Dermal	Non-applicable	Non-applicable	3.33 mg/kg	Non-applicable
EC: 205-411-0	Inhalation	10.6 mg/m³	80 mg/m³	10.6 mg/m³	0.015 mg/m³

DNEL (General population):

		Short exposure		Long exposure	
Identification		Systemic	Local	Systemic	Local
2,4,6-tris(dimethylaminomethyl)phenol	Oral	Non-applicable	Non-applicable	0.075 mg/kg	Non-applicable
CAS: 90-72-2	Dermal	Non-applicable	Non-applicable	0.075 mg/kg	Non-applicable
EC: 202-013-9	Inhalation	Non-applicable	Non-applicable	0.13 mg/m³	Non-applicable

PNEC:

Identification				
2,4,6-tris(dimethylaminomethyl)phenol	STP	0.2 mg/L	Fresh water	0.046 mg/L
CAS: 90-72-2	Soil	0.025 mg/kg	Marine water	0.005 mg/L
EC: 202-013-9	Intermittent	0.46 mg/L	Sediment (Fresh water)	0.262 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.026 mg/kg
2-piperazin-1-ylethylamine	STP	250 mg/L	Fresh water	0.058 mg/L
CAS: 140-31-8	Soil	1 mg/kg	Marine water	0.006 mg/L
EC: 205-411-0	Intermittent	0.58 mg/L	Sediment (Fresh water)	215 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	21.5 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.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

C.- Specific protection for the hands

Pictogram	PPE	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Nitrile, Breakthrough time: > 480 min, Thickness: 0.11 mm)	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	Panoramic glasses against splash/projections.	Clean daily and disinfect periodically according to the manufacturer´s instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Remarks
	Work clothing	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.
	Anti-slip work shoes	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007

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): 53.43 % weight

V.O.C. density at 20 ºC: Non-applicable

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 ºC:	Liquid
Appearance:	Viscous
Colour:	Blue
Odour:	Aminic
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	164 ºC

*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)

Vapour pressure at 20 ºC:	8.748E-2 Pa
Vapour pressure at 50 ºC:	1.61 Pa (0 kPa)
Evaporation rate at 20 ºC:	Non-applicable *
Product description:	
Density at 20 ºC:	Non-applicable *
Relative density at 20 ºC:	0.95
Dynamic viscosity at 20 ºC:	250000 cP
Kinematic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 40 ºC:	>20.5 mm²/s
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 ºC:	Non-applicable *
Partition coefficient n-octanol/water 20 ºC:	Non-applicable *
Solubility in water at 20 ºC:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Flammability:	
Flash Point:	Non Flammable (>60 ºC)
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	321 ºC
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *
Particle characteristics:	
Median equivalent diameter:	Non-applicable

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 ºC:	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:

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SECTION 10: STABILITY AND REACTIVITY (continued)

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:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO_2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

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: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

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

- Acute 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.
- Corrosivity/Irritability:

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

- Contact with the skin: Produces skin inflammation.
- 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, as it does not 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. However, it contains substances classified as hazardous for inhalation. 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:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated CAS: 68683-29-4	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L	
Fatty acids, tall-oil, reaction products with tetraethylenepentamine CAS: 68953-36-6	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	Non-applicable	
Tetraethylenepentamine CAS: 112-57-2	LD50 oral	500 mg/kg	Rat
	LD50 dermal	1100 mg/kg	Rat
	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	
2-piperazin-1-ylethylamine CAS: 140-31-8	LD50 oral	500 mg/kg	
	LD50 dermal	866 mg/kg	Rabbit
	LC50 inhalation	>20 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
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2	LC50	345 mg/L (96 h)	QSAR	Fish
	EC50	Non-applicable		
	EC50	Non-applicable		
Tetraethylenepentamine CAS: 112-57-2	LC50	420 mg/L (96 h)	Poecilia reticulata	Fish
	EC50	24.1 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	2.1 mg/L (72 h)	Selenastrum capricornutum	Algae
2-piperazin-1-ylethylamine CAS: 140-31-8	LC50	2190 mg/L (96 h)	Pimephales promelas	Fish
	EC50	58 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	1000 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
2-piperazin-1-ylethylamine CAS: 140-31-8	BOD5	Non-applicable	Concentration	30 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	0 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2	BCF	3
	Pow Log	0.77
	Potential	Low

12.4 Mobility in soil:

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Absorption/desorption		Volatility	
2,4,6-tris(dimethylaminomethyl)phenol	Koc	15130	Henry	9.312E-12 Pa·m³/mol
CAS: 90-72-2	Conclusion	Immobile	Dry soil	No
	Surface tension	Non-applicable	Moist soil	No
Tetraethylenepentamine	Koc	3.6	Henry	3E-15 Pa·m³/mol
CAS: 112-57-2	Conclusion	Very High	Dry soil	Non-applicable
	Surface tension	4.35E-2 N/m (25 ºC)	Moist soil	Non-applicable
2-piperazin-1-ylethylamine	Koc	37000	Henry	Non-applicable
CAS: 140-31-8	Conclusion	Immobile	Dry soil	Non-applicable
	Surface tension	4.001E-2 N/m (25 ºC)	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
08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances	Dangerous

Type of waste:

HP14 Ecotoxic, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP13 Sensitising, HP4 Irritant — skin irritation and eye damage

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:

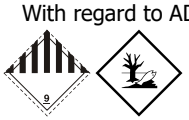
In accordance with Annex II of UK REACH the provisions related to waste management are stated:

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:**	UN3082
14.2	**UN proper shipping name:**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tetraethylenepentamine)
14.3	**Transport hazard class(es):**	9
	Labels:	9
14.4	**Packing group:**	III
14.5	**Environmental hazards:**	Yes
14.6	**Special precautions for user**	
	Tunnel restriction code:	-
	Physico-Chemical properties:	see section 9
	Limited quantities:	5 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:

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SECTION 14: TRANSPORT INFORMATION (continued)

14.1	**UN number:**	UN3082
14.2	**UN proper shipping name:**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tetraethylenepentamine)
14.3	**Transport hazard class(es):**	9
	Labels:	9
14.4	**Packing group:**	III
14.5	**Marine pollutant:**	Yes
14.6	**Special precautions for user**	
	Special regulations:	335, 969, 274
	EmS Codes:	F-A, S-F
	Physico-Chemical properties:	see section 9
	Limited quantities:	5 L
	Segregation group:	Non-applicable
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:**	UN3082
14.2	**UN proper shipping name:**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tetraethylenepentamine)
14.3	**Transport hazard class(es):**	9
	Labels:	9
14.4	**Packing group:**	III
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:

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.

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+H312 - Harmful if swallowed or in contact with skin.
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
Aquatic Chronic 4: H413 - May cause long lasting harmful effects to aquatic life.
Eye Irrit. 2: H319 - Causes serious eye irritation.
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.
STOT SE 3: H335 - May cause respiratory irritation.

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

- END OF SAFETY DATA SHEET -