

**BELZONA® 1111 - SUPER METAL - SOLIDIFIER
SN2598**

Date of compilation: 04/12/2023

Revised: 10/02/2025

Version: 1.1 (Replaced 1)

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

1.1 Product identifier: BELZONA® 1111 - SUPER METAL - SOLIDIFIER
SN2598

Other means of identification:

Not relevant

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

Relevant uses (Industrial user):

- Filler for repairing surfaces

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:

Belzona Limited

Claro Road

HG1 4DS Harrogate - North Yorkshire - England

Phone: +441423567641

sds@belzona.com

<https://www.belzona.com>

Belzona United Kingdom

Unit 3 Vista, Stephen Wade Way, Off Manor Lane

Hawarden, Wales, CH5 3FN, United Kingdom

Telephone: +44 1423 567641

Fax: +44 1423 505967

1.4 Emergency telephone number: VelocityEHS: +1 813-248-0585 (International) (24/7/365)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

This product contains less than 1% respirable crystalline silica, so it does not require classification

GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):

Classification of this product has been carried out in accordance with GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567).

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411

Eye Dam. 1: Serious eye damage, Category 1, H318

Skin Corr. 1B: Skin corrosion, Category 1B, H314

Skin Sens. 1A: Sensitisation, skin, Category 1A, H317

2.2 Label elements:

GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):

Danger



Hazard statements:

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:

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SECTION 2: HAZARDS IDENTIFICATION (continued)

P260: Do not breathe vapours.

P273: Avoid release to the environment.

P280: Wear protective gloves, protective clothing and eye protection.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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.

P310: Immediately call a POISON CENTER or doctor.

Supplementary information:

Contains 4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3epoxypropane, reaction products with ethylene diamine.

Substances that contribute to the classification

2,2'-iminodiethylamine; m-phenylenebis(methylamine); 2,4,6-tris(dimethylaminomethyl)phenol; 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine

2.3 Other hazards:

Product does not meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Not relevant

3.2 Mixture:

Chemical description: Formulated polyamines

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: 111-40-0 EC: 203-865-4 REACH: 01-2119473793-27-XXXX	2,2'-iminodiethylamine Acute Tox. 2: H330; Acute Tox. 4: H302+H312; Eye Dam. 1: H318; Skin Corr. 1B: H314; Skin Sens. 1B: H317; STOT SE H335 - Danger	10 - <30 %
CAS: 100-51-6 EC: 202-859-9 REACH: 01-2119492630-38-XXXX	benzyl alcohol Acute Tox. 4: H302+H332; Eye Irrit. 2: H319 - Warning	5 - <15 %
CAS: 57214-10-5 EC: Not relevant	Formaldehyde polymer with 1,3-benzenedimethanamine and phenol Aquatic Acute 1: H400; Aquatic Chronic 1: H410 - Warning	5 - <10 %
CAS: 1477-55-0 EC: 216-032-5 REACH: 01-2119480150-50-XXXX	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	1 - <5 %
CAS: 90-72-2 EC: 202-013-9 REACH: 01-2119560597-27-XXXX	2,4,6-tris(dimethylaminomethyl)phenol Acute Tox. 4: H302; Eye Dam. 1: H318; Skin Corr. 1C: H314 - Danger	1 - <5 %
CAS: 25513-64-8 EC: 247-063-2 REACH: 01-2119560598-25-XXXX	2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine Acute Tox. 4: H302; Aquatic Chronic 3: H412; Eye Dam. 1: H318; Skin Corr. 1A: H314; Skin Sens. 1A: H317 - Danger	1 - <5 %
CAS: 72480-18-3 EC: 701-405-1	4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3epoxypropane, reaction products with ethylene diamine Acute Tox. 4: H302; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Dam. 1: H318; Skin Sens. 1: H317 - Danger	1 - <5 %

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

Other information:

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Identification	M-factor	
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol CAS: 57214-10-5	Acute	1
	Chronic	1
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3epoxypropane , reaction products with ethylene diamine CAS: 72480-18-3	Acute	1
	Chronic	1

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
2,2'-iminodiethylamine CAS: 111-40-0 EC: 203-865-4	LD50 oral	1553 mg/kg	Rat
	LD50 dermal	1045 mg/kg	Rabbit
	LC50 inhalation dust	0.07 mg/L *	
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	LD50 oral	1620 mg/kg	
	LD50 dermal	Not relevant	
	LC50 inhalation dust	3.3 mg/L *	
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	LD50 oral	930 mg/kg	Rat
	LD50 dermal	Not relevant	
	LC50 inhalation dust	1.34 mg/L *	
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	LD50 oral	2169 mg/kg	Rat
	LD50 dermal	Not relevant	
	LC50 inhalation dust	Not relevant	
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine CAS: 25513-64-8 EC: 247-063-2	LD50 oral	910 mg/kg	Rat
	LD50 dermal	Not relevant	
	LC50 inhalation dust	Not relevant	

* Equivalent ATE value of the substance applicable to the exposure route of the product. For the ATE value associated with the exposure route of the substance, see section 11.

DETA is toxic by inhalation when aerosolised or sprayed, however the chemical vapours show no signs of toxicity. If the product is not aerosolised or sprayed, inhalation toxicity does not apply when the toxicity of the finished product is calculated.

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:

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:

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SECTION 4: FIRST AID MEASURES (continued)

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:

Not relevant

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

Carbon dioxide extinguisher (BC), Dry Chemical Powder (ABC) Fire Extinguisher, Foam extinguisher (AB)

Unsuitable extinguishing media:

Water jet

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. 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:

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

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:

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

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

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SECTION 7: HANDLING AND STORAGE (continued)

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

Due to its non-inflammable nature, the product does not present a fire risk under normal conditions of storage, handling and use.

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

Preferably use aspiration for cleaning. Given the danger of the product by inhalation, any cleaning method that involves exposure to the product in this way (sweeping, etc.) is not recommended

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Minimum Temp.: 5 °C

Maximum Temp.: 30 °C

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 assessed in the workplace:

EH40/2005 Workplace exposure limits, fourth edition, published 2020:

Identification	Occupational exposure limits		
	WEL (8h)	1 ppm	4.3 mg/m³
2,2'-iminodiethylamine CAS: 111-40-0	WEL (15 min)		

Nuisance dust: Inhalable dust 10 mg/m³ // Respirable dust 4 mg/m³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2,2'-iminodiethylamine CAS: 111-40-0 EC: 203-865-4	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	11.4 mg/kg	Not relevant
	Inhalation	92.1 mg/m³	2.6 mg/m³	15.4 mg/m³	0.87 mg/m³
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	40 mg/kg	Not relevant	8 mg/kg	Not relevant
	Inhalation	110 mg/m³	Not relevant	22 mg/m³	Not relevant
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	0.33 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	1.2 mg/m³	0.2 mg/m³
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	0.15 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	0.53 mg/m³	Not relevant

DNEL (General population):

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2,2'-iminodiethylamine CAS: 111-40-0 EC: 203-865-4	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	4.88 mg/kg	Not relevant	4.88 mg/kg	Not relevant
	Inhalation	27.5 mg/m³	Not relevant	4.6 mg/m³	Not relevant
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	Oral	20 mg/kg	Not relevant	4 mg/kg	Not relevant
	Dermal	20 mg/kg	Not relevant	4 mg/kg	Not relevant
	Inhalation	27 mg/m³	Not relevant	5.4 mg/m³	Not relevant
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	Oral	Not relevant	Not relevant	0.075 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	0.075 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	0.13 mg/m³	Not relevant
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine CAS: 25513-64-8 EC: 247-063-2	Oral	Not relevant	Not relevant	0.05 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	Not relevant	Not relevant

PNEC:


Identification					
2,2'-iminodiethylamine CAS: 111-40-0 EC: 203-865-4	STP	6 mg/L	Fresh water	0.56 mg/L	
	Soil	7.97 mg/kg	Marine water	0.056 mg/L	
	Intermittent	0.32 mg/L	Sediment (Fresh water)	1072 mg/kg	
	Oral	Not relevant	Sediment (Marine water)	107.2 mg/kg	
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	Not relevant	Sediment (Marine water)	0.527 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	Not relevant	Sediment (Marine water)	1.24 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	Not relevant	Sediment (Marine water)	0.026 mg/kg	
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine CAS: 25513-64-8 EC: 247-063-2	STP	72 mg/L	Fresh water	0.102 mg/L	
	Soil	10 mg/kg	Marine water	0.01 mg/L	
	Intermittent	0.315 mg/L	Sediment (Fresh water)	0.622 mg/kg	
	Oral	Not relevant	Sediment (Marine water)	0.062 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>> or <<CE 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
	Filter mask for gases and vapours (Filter type: ABEK)	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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Pictogram	PPE	Remarks
	Continuous flow compressed air line breathing device (Filter type: ABEK)	Replace when an increase in resistance to breathing is observed and/or a smell or taste of the contaminant is detected.

C.- Specific protection for the hands




Pictogram	PPE	Remarks
	Chemical protective gloves (Material: Nitrile, Breakthrough time: 10 - 30 min, Thickness: 0.12 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
	Face shield	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.
	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
	Disposable clothing for protection against chemical risks	For professional use only. Clean periodically according to the manufacturer's instructions.
	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.
	Safety footwear for protection against chemical risk	Replace boots at any sign of deterioration.

F.- Additional emergency measures

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

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:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

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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:	Solid
Appearance:	Paste
Colour:	 Grey
Odour:	Ammoniacal
Odour threshold:	Not relevant *

Volatility:

Boiling point at atmospheric pressure:	>100 °C
Vapour pressure at 20 °C:	Not relevant *
Vapour pressure at 50 °C:	Not relevant *
Evaporation rate at 20 °C:	Not relevant *

Product description:

Density at 20 °C:	1543 kg/m³
Relative density at 20 °C:	1.62 - 1.72
Dynamic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 40 °C:	>20.5 mm²/s
Concentration:	Not relevant *
pH:	Not relevant *
Vapour density at 20 °C:	Not relevant *
Partition coefficient n-octanol/water 20 °C:	Not relevant *
Solubility in water at 20 °C:	Not relevant *
Solubility properties:	Not relevant *
Decomposition temperature:	Not relevant *
Melting point/freezing point:	Not relevant *

Flammability:

Flash Point:	>100 °C
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	358 °C
Lower flammability limit:	Not relevant *
Upper flammability limit:	Not relevant *

Explosive (Solid):

Lower explosive limit:	Not relevant *
Upper explosive limit:	Not relevant *

Particle characteristics:

Median equivalent diameter:	Not relevant *
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9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *

*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)

Aerosols-total percentage (by mass) of flammable components: Not relevant *

Other safety characteristics:

Surface tension at 20 °C: Not relevant *

Refraction index: Not relevant *

*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 from Safety Data Sheet.

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:

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: 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):

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- 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: Talc (3); Glass, oxide, chemicals (1); Titanium dioxide (2B)
- 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:

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:

Not available

Product-specific toxicological information:

Acute toxicity		Genus
LD50 oral	>2092 mg/kg	
LD50 dermal	>2832 mg/kg	
LC50 inhalation dust	18 mg/L	

SECTION 12: ECOLOGICAL INFORMATION

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

Toxic to aquatic life with long lasting effects.

12.1 Toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
2,2'-iminodiethylamine CAS: 111-40-0	LC50	430 mg/L (96 h)	Poecilia reticulata	Fish
	EC50	16 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	187 mg/L (72 h)	Selenastrum capricornutum	Algae
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
Formaldehyde polymer with 1,3-benzenedimethanamine and phenol CAS: 57214-10-5	LC50	>0.1 - 1 mg/L (96 h)		Fish
	EC50	>0.1 - 1 mg/L (48 h)		Crustacean
	EC50	>0.1 - 1 mg/L (72 h)		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

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration	Species	Genus
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine CAS: 25513-64-8	LC50	Not available	
	EC50	Not available	
	EC50	29.5 mg/L (72 h)	Scenedesmus subspicatus Algae
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with ethylene diamine CAS: 72480-18-3	LC50	>0.1 - 1 mg/L (96 h)	Fish
	EC50	>0.1 - 1 mg/L (48 h)	Crustacean
	EC50	>0.1 - 1 mg/L (72 h)	Algae

Chronic toxicity:

Identification	Concentration	Species	Genus
2,2'-iminodiethylamine CAS: 111-40-0	NOEC	10 mg/L	Gasterosteus aculeatus Fish
	NOEC	5.6 mg/L	Daphnia magna Crustacean
benzyl alcohol CAS: 100-51-6	NOEC	48.897 mg/L	N/A Fish
	NOEC	51 mg/L	Daphnia magna Crustacean
m-phenylenebis(methylamine) CAS: 1477-55-0	NOEC	Not available	
	NOEC	4.7 mg/L	Daphnia magna Crustacean
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine CAS: 25513-64-8	NOEC	10.9 mg/L	Danio rerio Fish
	NOEC	1.02 mg/L	Daphnia magna Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability	Biodegradability
2,2'-iminodiethylamine CAS: 111-40-0 EC: 203-865-4	BOD5	Not available Concentration 10 mg/L
	COD	Not available Period 21 days
	BOD5/COD	Not available % Biodegradable 87 %
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	BOD5	Not available Concentration 100 mg/L
	COD	Not available Period 14 days
	BOD5/COD	Not available % Biodegradable 94 %
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	BOD5	Not available Concentration 14 mg/L
	COD	Not available Period 28 days
	BOD5/COD	Not available % Biodegradable 49 %
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine CAS: 25513-64-8 EC: 247-063-2	BOD5	Not available Concentration 10 mg/L
	COD	Not available Period 28 days
	BOD5/COD	Not available % Biodegradable 7 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
2,2'-iminodiethylamine CAS: 111-40-0 EC: 203-865-4	BCF	2
	Pow Log	-1.3
	Potential	Low
benzyl alcohol CAS: 100-51-6 EC: 202-859-9	BCF	0
	Pow Log	1.1
	Potential	Low
m-phenylenebis(methylamine) CAS: 1477-55-0 EC: 216-032-5	BCF	3
	Pow Log	0.18
	Potential	Low
2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2 EC: 202-013-9	BCF	
	Pow Log	0.22
	Potential	

12.4 Mobility in soil:

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Absorption/desorption		Volatility	
2,2'-iminodiethylamine CAS: 111-40-0	Koc	Not available	Henry	Not available
	Conclusion	Not available	Dry soil	Not available
	Surface tension	4.164E-2 N/m (25 °C)	Moist soil	Not available
benzyl alcohol CAS: 100-51-6	Koc	Not available	Henry	Not available
	Conclusion	Not available	Dry soil	Not available
	Surface tension	3.679E-2 N/m (25 °C)	Moist soil	Not available
m-phenylenebis(methylamine) CAS: 1477-55-0	Koc	1300	Henry	Not available
	Conclusion	Low	Dry soil	Not available
	Surface tension	Not available	Moist soil	Not available

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	Hazardous

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 (England & Wales) 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-hazardous 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 (England & Wales) Regulations 2011.

SECTION 14: TRANSPORT INFORMATION

Other information:

Labelling and packaging requirements may vary with pack and load size. Please refer to the current transport regulations.

Transport of dangerous goods by land:

With regard to ADR 2023 and RID 2023:

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SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number:** UN3259
- 14.2 UN proper shipping name:** AMINES, SOLID, CORROSIVE, N.O.S. (4,4'Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3epoxypropane , reaction products with ethylene diamine ; 2,2'-iminodiethylamine)
- 14.3 Transport hazard class(es):** 8
Labels: 8
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** Yes
- 14.6 Special precautions for user**
Tunnel restriction code: E
Physico-Chemical properties: see section 9
Limited quantities: 5 kg
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Not relevant

Transport of dangerous goods by sea:

With regard to IMDG 41-22:



- 14.1 UN number:** UN3259
- 14.2 UN proper shipping name:** AMINES, SOLID, CORROSIVE, N.O.S. (4,4'Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3epoxypropane , reaction products with ethylene diamine ; 2,2'-iminodiethylamine)
- 14.3 Transport hazard class(es):** 8
Labels: 8
- 14.4 Packing group:** III
- 14.5 Marine pollutant:** Yes
- 14.6 Special precautions for user**
Special regulations: 274, 223
EmS Codes: F-A, S-B
Physico-Chemical properties: see section 9
Limited quantities: 5 kg
Segregation group: SGG18
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Not relevant

Transport of dangerous goods by air:

With regard to IATA/ICAO 2024:



- 14.1 UN number:** UN3259
- 14.2 UN proper shipping name:** AMINES, SOLID, CORROSIVE, N.O.S. (4,4'Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3epoxypropane , reaction products with ethylene diamine ; 2,2'-iminodiethylamine)
- 14.3 Transport hazard class(es):** 8
Labels: 8
- 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:** Not relevant

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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): Not relevant
- Substances listed in UK REACH Authorisation List (Annex 14): Not relevant

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):

Occupational exposure to respirable crystalline silica must be controlled pursuant to Directive (EU) 2019/130.

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:

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.

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Section: 1, 2, 3, 5, 8, 11, 15, 16

Texts of the legislative phrases mentioned in section 2:

H318: Causes serious eye damage.

H411: Toxic to aquatic life with long lasting effects.

H317: May cause an allergic skin reaction.

H314: Causes severe skin burns and eye damage.

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 (UK S.I. 2019/720 and UK S.I. 2020/1567):

Acute Tox. 2: H330 - Fatal if inhaled.

Acute Tox. 4: H302 - Harmful if swallowed.

Acute Tox. 4: H302+H312 - Harmful if swallowed or in contact with skin.

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 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.

Skin Corr. 1A: H314 - Causes severe skin burns and eye damage.

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.

Skin Corr. 1C: H314 - Causes severe skin burns and eye damage.

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.

STOT SE 3: H335 - May cause respiratory irritation.

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SECTION 16: OTHER INFORMATION (continued)

Classification procedure:

Eye Dam. 1: Calculation method

Aquatic Chronic 2: Calculation method

Skin Sens. 1A: Calculation method

Skin Corr. 1B: Calculation method

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 -