Safety Data Sheet according to Regulation (EC) 'No. 2015/830

SECTION 1: Identification of the Substance/Mixture and the Company/Undertaking

1.1 Product Identifier

Product Name: Peran EWS Hardener B

Revision Date: 04/02/2021

Supersedes Date: 20/09/2018

UFI Code: NNX0-J0FY-M00D-1T8R

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

Component of multicomponent coatings - Professional use only. Coatings and paints, thinners, paint removers. Manual activities involving hand contact. Widespread use leading to inclusion into/onto article (indoor). For use by appropriately trained applicators. Advised against: Home DIY applications. Advised against: Spray application, because of the additional hazards. Widespread use leading to inclusion into/onto article (outdoor). Roller application or brushing.

1.3 Details of the supplier of the safety data sheet

Supplier:

Flowcrete UK Ltd.
The Flooring Technology Centre
Booth Lane
Moston, Sandbach, Cheshire. UK
CW11 3QF

Tel: +44 (0)1270 753000
Fax: +44 (0)1270 753333
ehs.uk@flowcrete.com
http://www.flowcrete.co.uk

Datasheet Produced by: ehs.uk@flowcrete.com

1.4 Emergency telephone number:

CHEMTREC +001 703 5273887 (Outside US)
CHEMTREC 1-800-424-9300 (Inside US)

SECTION 2: Hazard Identification

2.1 Classification of the substance or mixture

Classification according to Classification, Labeling & Packaging Regulation (EC) 1272/2008

HAZARD STATEMENTS

Skin Corrosion, category 1B	H314-1B

Skin Sensitizer, category 1	H317
Reproductive_ToxicityD_category_2	H361d
Hazardous to the aquatic environment, Chronic, category 3	H412

2.2 Label elements

Symbol(s) of Product

Signal Word

Danger

Named Chemicals on Label

Salicylic acid, m-Phenylenebis(methylamine), 3-Aminomethyl-3,5,5-trimethylcyclohexylamine

HAZARD STATEMENTS

Skin Corrosion, category 1B	H314-1B	Causes severe skin burns and eye damage.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Reproductive_ToxicityD_category_2	H361d	Suspected of damaging the unborn child.
Hazardous to the aquatic environment, Chronic, category 3	H412	Harmful to aquatic life with long lasting effects.

PRECAUTION PHRASES

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/ face protection.
P284	Wear respiratory protection.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/attention.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.

2.3 Other hazards

No Information

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

SECTION 3: Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

CAS-No.	EINEC No.	Name According to EEC	%
100-51-6	202-859-9	Benzyl alcohol	25 - <50
2855-13-2	220-666-8	3-Aminomethyl-3,5,5-trimethylcyclohexylamine	10 - <25
90-72-2	202-013-9	2,4,6-Tris(dimethylaminomethyl)phenol	2.5 - <10
1477-55-0	216-032-5	m-Phenylenebis(methylamine)	2.5 - <10
69-72-7	200-712-3	Salicylic acid	2.5 - <10
9046-10-0	618-561-0	Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.	2.5 - <10

CAS-No.	REACH Reg No.	CLP Symbols	CLP Hazard Statements	M-Factors
100-51-6	01-2119492630-38	GHS07	H302-332	
2855-13-2	01-2119514687-32	GHS05-GHS07	H302-312-314-317-412	
90-72-2	01-2119560597-27	GHS07	H315-319	
1477-55-0	01-2119480150-50	GHS05-GHS07	H302-314-317-332-412	
69-72-7	01-2119486984-17	GHS05-GHS07-GHS08	H302-318-361d	
9046-10-0	01-2119557899-12	GHS05	H314-412	

Additional Information: The text for CLP Hazard Statements shown above (if any) is given in Section 16.

SECTION 4: First-aid Measures

4.1 Description of First Aid Measures

GENERAL NOTES: When symptoms persist or in all cases of doubt seek medical advice. Show this safety data sheet to the doctor in attendance. Risk of product entering the lungs on vomiting after ingestion. Remove contaminated clothing and shoes.
AFTER INHALATION: Remove person to fresh air. If signs/symptoms continue, get medical attention.
AFTER SKIN CONTACT: Use a mild soap if available. Consult a physician. Do not use solvent or thinners to clean skin. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
AFTER EYE CONTACT: Immediate medical attention is required. Keep eye wide open while rinsing. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses.
AFTER INGESTION: Gently wipe or rinse the inside of the mouth with water. If conscious, drink plenty of water. Never give anything by mouth to an unconscious person. If swallowed, seek medical advice immediately and show this container or label. If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel.

Self protection of the first aider:

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye damage. Causes burns. May cause sensitization by skin contact. Harmful by inhalation and if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

SECTION 5: Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam, Water Fog

FOR SAFETY REASONS NOT TO BE USED: Do not use a solid water stream as it may scatter and spread fire. Alcohol, Alcohol based solutions, any other media not listed above.

5.2 Special hazards arising from the substance or mixture

In case of fire hazardous decomposition products may be produced such as: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.

5.3 Advice for firefighters

Keep containers and surroundings cool with water spray. In the event of fire, wear self-contained breathing apparatus. Do not use a solid water stream as it may scatter and spread fire. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. For personal protection see section 8.2. Ensure adequate ventilation. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Discharge into the environment must be avoided. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

FURTHER INSTRUCTIONS: Please refer to EU disposal requirements or country specific disposal requirements for this material. See Section 13 for further information. Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

People handling epoxy products must have received special training according to guidelines from the National Occupational Health and Safety Board. Wear personal protective equipment. Do not breathe vapours or spray mist. Avoid contact with skin and eyes. Apply technical measures to comply with the occupational exposure limits (see section 8).
In the case of sensitisation to any of the ingredients, it is inadvisable to work with the product. Handle in accordance with good industrial hygiene and safety practice. Keep working clothes separately. Keep away from food, drink and animal feedingstuffs. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Avoid temperatures above 40 °C, direct sunlight and contact with sources of heat. Do not freeze.
STORAGE CONDITIONS: Keep out of the reach of children. Keep at temperatures between 15 and 30 °C. Store in original container. Keep container tightly closed in a dry and well-ventilated place. Keep container closed when not in use. Keep away from food, drink and animal feeding stuffs.

7.3 Specific end use(s)

Component of multicomponent coatings. The mixing and application to be in accordance with the technical data sheets.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits
(UK WELS)

Name	CAS-No.	LTEL ppm	STEL ppm	STEL mg/m3	LTEL mg/m3
Benzyl alcohol	100-51-6				
3-Aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2				
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2				
m-Phenylenebis(methylamine)	1477-55-0				
Salicylic acid	69-72-7				
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.	9046-10-0				

Name	CAS-No.	OEL Note
Benzyl alcohol	100-51-6	

3-Aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2
m-Phenylenebis(methylamine)	1477-55-0
Salicylic acid	69-72-7
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.	9046-10-0

FURTHER ADVICE: Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified under the EU CLP Regulation.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: No personal respiratory protective equipment normally required. In case of insufficient ventilation wear suitable respiratory equipment, filter ABEK-P2.

EYE PROTECTION: Eye wash bottle with pure water. Face-shield. Safety glasses with side-shields conforming to EN 166.

HAND PROTECTION: Use chemical resistant gloves (EN 374): Butyl rubber; thickness >= 0,5 mm; breakthrough time >=60 min. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature). Long sleeved clothing. Remove and wash contaminated clothing before re-use.

OTHER PROTECTIVE EQUIPMENT: Ensure that eyewash stations and safety showers are close to the workstation location.

ENGINEERING CONTROLS: Ensure adequate ventilation, especially in confined areas.

Chemical Name:
Benzyl alcohol

EC No.: 202-859-9

CAS-No.: 100-51-6

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required					20 mg/kg bw/d		4 mg/kg bw/d
Inhalation	-	110 mg/m³	-	22 mg/m³	-	27 mg/m³	-	5.4 mg/m³
Dermal	-	40 mg/kg bw/d	-	8 mg/kg bw/d	-	20 mg/kg bw/d	-	4 mg/kg bw/d

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	1 mg/l
Fresh water sediments	5.27 mg/kg
Marine water	0.1 mg/l
Marine sediments	0.527 mg/kg
Food chain	
Microorganisms in sewage treatment	39 mg/l
soil (agricultural)	0.456 mg/kg
Air	

Chemical Name:

3-Aminomethyl-3,5,5-trimethylcyclohexylamine

EC No.: 220-666-8

CAS-No.: 2855-13-2

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							0.526 mg/kg bw/d
Inhalation	0.073 mg/m³		0.073 mg/m³					
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.06 mg/l
Fresh water sediments	5.784 mg/kg (sediment dw)
Marine water	0.006 mg/l
Marine sediments	0.578 mg/kg (sediment dw)
Food chain	Not expected to be bioaccumulative.
Microorganisms in sewage treatment	3.18 mg/l
soil (agricultural)	1.121 mg/kg (soil dw)
Air	

Chemical Name:

2,4,6-Tris(dimethylaminomethyl)phenol

EC No.: 202-013-9

CAS-No.: 90-72-2

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							
Inhalation				0.31 mg/m³				
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.084 mg/l
Fresh water sediments	
Marine water	0.0084 mg/l
Marine sediments	
Food chain	
Microorganisms in sewage treatment	0.2 mg/l
soil (agricultural)	
Air	

Chemical Name:

m-Phenylenebis(methylamine)

EC No.: 216-032-5

CAS-No.: 1477-55-0

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							
Inhalation			0.2 mg/m³	1.2 mg/m³				
Dermal				0.33 mg/kg bw/d				

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.094 mg/l
Fresh water sediments	0.43 mg/kg
Marine water	0.0094 mg/l
Marine sediments	0.043 mg/kg
Food chain	
Microorganisms in sewage treatment	10 mg/l
soil (agricultural)	0.045 mg/kg
Air	

Chemical Name:

Salicylic acid

EC No.: 200-712-3

CAS-No.: 69-72-7

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required					4 mg/kg bw/d		1 mg/kg bw/d
Inhalation			5 mg/m3	5 mg/m³				4 mg/m3
Dermal				2.3 mg/kg bw/d				1 mg/kg bw/d

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.2 mg/l
Fresh water sediments	1.42 mg/kg
Marine water	0.02 mg/l
Marine sediments	0.142 mg/kg
Food chain	
Microorganisms in sewage treatment	162 mg/l
soil (agricultural)	0.166 mg/kg
Air	

Chemical Name:

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.

EC No.: 618-561-0

CAS-No.: 9046-10-0

DNELs - Derived no effect level

	Workers				Consumers			
Route of Exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							
Inhalation				1.36 mg/m3				
Dermal				2.5 mg/kg				

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.015 mg/l
Fresh water sediments	0.132
Marine water	0.014 mg/l
Marine sediments	0.125
Food chain	
Microorganisms in sewage treatment	7.5 mg/l
soil (agricultural)	0.0176
Air	-

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Yellowish
Physical State	Liquid
Odor	Amine like
Odor threshold	Not determined
pH	Not determined
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	205 - N.D.
Flash Point, (°C)	>100
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	1.2 - 13
Vapour Pressure	Not determined
Vapour density	Not determined
Relative density	ca 1.05
Solubility in / Miscibility with water	Limited
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	Not determined
Explosive properties	

	Not determined
Oxidising properties	Not determined

9.2 Other information

VOC Content g/l: <200

This is a calculated maximum VOC content for the mixed ready to use product (to Directive 2004/42/EC).

SECTION 10: Stability and Reactivity

10.1 Reactivity
No reactivity hazards known under recommended storage and use conditions.

10.2 Chemical stability
No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions
Exothermic reaction with strong acids.

10.4 Conditions to avoid
Avoid temperatures above 40 °C, direct sunlight and contact with sources of heat. Do not freeze.

10.5 Incompatible materials
Acids. Oxidizing agents.

10.6 Hazardous decomposition products
In case of fire **hazardous decomposition products** may be produced such as**:** Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke. No decomposition if stored and applied as directed.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50:	No Information
Inhalation LC50:	No Information
Irritation:	Irritating to eyes and skin. Vapour/spray mist may irritate respiratory system and lungs.
Corrosivity:	Corrosive to eyes and skin.
Sensitization:	Prolonged or repeated skin contact may result in allergic eczema.
Repeated dose toxicity:	No information available.
Carcinogenicity:	No information available.
Mutagenicity:	No information available.
Toxicity for reproduction:	No information available.
STOT-single exposure:	No information available.
STOT-repeated exposure:	No information available.
Aspiration hazard:	No information available.

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Name According to EEC	Oral LD50	Dermal LD50	Vapor LC50	Gas LC50	Dust/Mist LC50
100-51-6	Benzyl alcohol	1620 mg/kg (rat)	2001 mg/kg (rabbit)	>20 (N/A)	>20000 (N/A)	>4 mg/l (4 h, rat)
2855-13-2	3-Aminomethyl-3,5,5-trimethylcyclohexylamine	1030 mg/kg (rat)	1840 mg/kg (rabbit)	Not determined	Not determined	> 5.01 mg/l (rat, 4h)
90-72-2	2,4,6-Tris (dimethylaminomethyl)phenol	2169 mg/kg (rat)				
1477-55-0	m-Phenylenebis (methylamine)	930 mg/kg (rat)	>2000 mg/kg (rabbit)	Not determined	Not determined	1.34 mg/l (rat)
69-72-7	Salicylic acid	891 mg/kg, (rat) OECD 401	>2000 mg/kg (rat)		0.000	0.000
9046-10-0	Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.	2885 mg/kg (rat)	2980 mg/kg (rabbit)	Not determined	Not determined	Not determined

Additional Information:

In the case of sensitisation to any of the ingredients, it is inadvisable to work with the product. Corrosive to skin. Corrosive - causes irreversible eye damage. Ingestion may cause nausea, vomiting, sore throat, stomach-ache and eventually lead to a perforation of the intestine. May cause allergic skin reaction.

SECTION 12: Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia): No information

IC50 72hr (Algae): No information

LC50 96hr (fish): No information

12.2 Persistence and degradability: No information

12.3 Bioaccumulative potential: No information

12.4 Mobility in soil: No information

12.5 Results of PBT and vPvB assessment: The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

12.6 Other adverse effects: No information

CAS-No.	Name According to EEC	EC50 48hr	IC50 72hr	LC50 96hr
100-51-6	Benzyl alcohol	230 mg/l	770 mg/l (Pseudokirchneriella)	460 mg/l (Pimephales promelas)
2855-13-2	3-Aminomethyl-3,5,5-trimethylcyclohexylamine	23 mg/l (Daphnia magna)	No information	110 mg/l (Leuciscus idus)
90-72-2	2,4,6-Tris(dimethylaminomethyl)phenol	No information	No information	
1477-55-0	m-Phenylenebis(methylamine)	15.2 mg/l (Daphnia magna)	20.3 mg/l (P. subcapitata)	87.6 mg/l (Oryzias latipes)
69-72-7	Salicylic acid	870 mg/l	> 100 mg/l (Desmodesmus subspicatus) OECD 201	1380 mg/l (pimephales promelas)
9046-10-0	Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia.	No information	No information	> 15 mg/l

SECTION 13: Disposal Considerations

13.1 **WASTE TREATMENT METHODS:** Dispose of waste material at an approved hazardous waste treatment/disposal facility in accordance with applicable local state, and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems. Contaminated packaging to be disposed of as product. Fully drained containers which are drop- and scrape-free can be treated as industrial waste, and can possibly be recycled. Empty containers should be taken to an approved waste handling site for recycling or disposal. The product should not be allowed to enter drains, water courses or the soil.

European Waste Code:	08 01 11*
Packaging Waste Code:	150110

SECTION 14: Transport Information

14.1	**UN number**	UN2735
14.2	**UN proper shipping name**	Amines, liquid, corrosive, N.O.S.
	Technical name	(m-Xylenediamine, Isophoronediamine)
14.3	**Transport hazard class(es)**	8
	Subsidiary shipping hazard	Not applicable
14.4	**Packing group**	III
14.5	**Environmental hazards**	Not applicable
14.6	**Special precautions for user**	Not applicable
	EmS-No.:	Not applicable
14.7	**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code**	Not applicable

SECTION 15: Regulatory Information

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

National Regulations:

Denmark Product Registration Number:	Not available
Danish MAL Code:	00-5 (1993)
Danish MAL Code - Mixture:	Not available
Sweden Product Registration Number:	Not available
Norway Product Registration Number:	58991
Germany WGK Class:	Not available
Covered by Directive 2012/18/EC (Seveso III):	Not applicable
Restrictions to product or to substances according to Annex XVII, Regulation (CE) 1907/2006:	Not applicable

Annex XIV - Authorisation List:

CAS-No.	Name According to EEC
Not Applicable	

SVHC - Substances of very high concern (Candidate List):

CAS-No.	Name According to EEC
Not Applicable	

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: Other Information

Text for CLP Hazard Statements shown in Section 3 describing each ingredient:

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361d	Suspected of damaging the unborn child.
H412	Harmful to aquatic life with long lasting effects.

Reasons for revision

Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification
08 - Exposure Controls/Personal Protection
11 - Toxicological Information
12 - Ecological Information
15 - Regulatory Information
Revision Statement(s) Changed

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List of References:

This Safety Data Sheet was compiled with data and information from the following sources:

The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark;
European Union Commission Regulation No. 1907/2006 on REACH as amended within Commission Regulation (EU) 2015/830;
European Union (EC) Regulation No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) and subsequent technical progress adaptations (ATP);
EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes".

Acronym & Abbreviation Key:

CLP	Classification, Labeling & Packaging Regulation
EC	European Commission
EU	European Union
US	United States
CAS	Chemical Abstract Service
EINECS	European Inventory of Existing Chemical Substances
REACH	Registration, Evaluation, Authorization of Chemicals Regulation
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
LTEL	Long term exposure limit
STEL	Short term exposure limit
OEL	Occupational exposure limit

ppm	Parts per million
mg/m3	Milligrams per cubic meter
TLV	Threshold Limit Value
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety & Health Administration
PEL	Permissible Exposure Limits
VOC	Volatile organic compounds
g/l	Grams per liter
mg/kg	Milligrams per kilogram
N/A	Not applicable
LD50	Lethal dose at 50%
LC50	Lethal concentration at 50%
EC50	Half maximal effective concentration
IC50	Half maximal inhibitory concentration
PBT	Persistent bioaccumulative toxic chemical
vPvB	Very persistent and very bioaccumulative
EEC	European Economic Community
ADR	International Transport of Dangerous Goods by Road
RID	International Transport of Dangerous Goods by Rail
UN	United Nations
IMDG	International Maritime Dangerous Goods Code
IATA	International Air Transport Association
MARPOL	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978
IBC	International Bulk Container
RTI	Respiratory Tract Irritation
NE	Narcotic Effects

For further information, please contact: Technical Services Department

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions and recommendations are not followed.