



Safety Data Sheet

prepared to UN GHS Revision 3

1. Identification of the Substance/Mixture and the Company/Undertaking

1.1	Product Identifier	F01-240-ESDSL-B-NT-1.921	Revision Date:	07/04/2017
	Product Name:	Flowshield ESD SL - Hardener B	Supersedes Date:	New SDS
1.2	Relevant identified uses of the substance or mixture and uses advised against	No Information		
1.3	Details of the supplier of the safety data sheet			
	Importer:	Flowcrete Australia Pty Ltd Unit 2, 41 Deakin Street Brendale Queensland 4500 Australia Phone: +61 7 3205 7115 Fax: +61 7 3205 3116 australia@flowcrete.com www.flowcreteaustralia.com.au		
	Datasheet Produced by:	Hadadek, Mohd - malaysia@flowcrete.com		
1.4	Emergency telephone number:	CHEMTREC 1-800-424-9300 (Inside US) CHEMTREC +1 703 5273887 (Outside US)		

2. Hazard Identification

2.1 Classification of the substance or mixture

Hazardous to the aquatic environment, Acute, category 1
Hazardous to the aquatic environment, Chronic, category 1
Reproductive Toxicity, category 2
Skin Corrosion, category 1

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

Nonylphenol

HAZARD STATEMENTS

Skin Corrosion, category 1	H314-1	Causes severe skin burns and eye damage.
Reproductive Toxicity, category 2	H361	Suspected of damaging fertility or the unborn child.
Hazardous to the aquatic environment, Acute, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, Chronic, category 1	H410	Very toxic to aquatic life with long lasting effects.

PRECAUTION PHRASES

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
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.
P308+P313	IF exposed or concerned: Get medical advice/attention
P391	Collect spillage.

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.

3. Composition/Information On Ingredients**3.2 Mixtures****Hazardous Ingredients**

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>%</u>
25154-52-3	Nonylphenol	25-50
9046-10-0	polyoxypropylenediamine	25-50
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	2.5-10
71074-89-0	bis (dimethylaminomethyl) phenol	1.0-2.5

<u>CAS-No.</u>	<u>GHS Symbols</u>	<u>GHS Hazard Statements</u>	<u>M-Factors</u>
25154-52-3	GHS05-GHS07-GHS08-GHS09	H302-314-361-400-410	0
9046-10-0	GHS05-GHS09	H314-411	0
90-72-2	GHS07	H315-319	0
71074-89-0	GHS05	H314	0

Additional Information: The text for GHS Hazard Statements shown above (if any) is given in Section 16.**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.**AFTER INHALATION:** Move to fresh air. Consult a physician after significant exposure.**AFTER SKIN CONTACT:** Use a mild soap if available. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician. In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Flush skin with large amounts of water. If irritation develops and persists, get medical attention.**AFTER EYE CONTACT:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.**AFTER INGESTION:** Gently wipe or rinse the inside of the mouth with water. Give small amounts of water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

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 burns. Harmful in contact with skin and if swallowed. Corrosive after repeated contact with skin and mucous membranes.

4.3 Indication of any immediate medical attention and special treatment needed

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

5. Fire-fighting Measures**5.1 Extinguishing Media:**

Carbon Dioxide, Dry Chemical, Foam

FOR SAFETY REASONS NOT TO BE USED: Alcohol, Alcohol based solutions, any other media not listed above.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. High volume water jet. 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. Contains epoxy constituents. See information supplied by the manufacturer.

6. Accidental Release Measures**6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains. May cause long-term adverse effects in the aquatic environment.

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

Please refer to disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

7. Handling and Storage**7.1 Precautions for safe handling**

INSTRUCTIONS FOR SAFE HANDLING: Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment.

PROTECTION AND HYGIENE MEASURES: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke. Avoid contact with the skin and the eyes. Wash hands before eating, drinking, or smoking.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: No Information

STORAGE CONDITIONS: Store in original container. Keep in a dry, cool and well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

7.3 Specific end use(s)

No specific advice for end use available.

8. Exposure Controls/Personal Protection**8.1 Control parameters****Ingredients with Occupational Exposure Limits (AU)**

<u>Name</u>	<u>CAS-No.</u>	<u>TWA ppm</u>	<u>STEL ppm</u>	<u>TWA mg/m3</u>	<u>STEL mg/m3</u>
Nonylphenol	25154-52-3				
polyoxypropylenediamine	9046-10-0				
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2				
bis (dimethylaminomethyl) phenol	71074-89-0				

<u>Name</u>	<u>CAS-No.</u>	<u>OEL Note</u>
Nonylphenol	25154-52-3	
polyoxypropylenediamine	9046-10-0	
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	
bis (dimethylaminomethyl) phenol	71074-89-0	

FURTHER INFORMATION: Refer to the regulatory exposure limits for the workforce enforced in each country.

8.2 Exposure controls**Personal Protection**

RESPIRATORY PROTECTION: Respirator with a vapor filter.

EYE PROTECTION: Tightly fitting safety goggles.

HAND PROTECTION: Rubber or plastic gloves. 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). Long sleeved clothing. Remove and wash contaminated clothing before re-use. Rubber or plastic apron.

OTHER PROTECTIVE EQUIPMENT: No Information

ENGINEERING CONTROLS: Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

9. Physical and Chemical Properties**9.1 Information on basic physical and chemical properties**

Appearance:	Not determined
Physical State	Liquid
Odor	Ammoniacal
Odor threshold	Not determined
pH	Alkaline
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	N.D. - N.D.
Flash Point, (°C)	100
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined

Upper/lower flammability or explosive limits	Not determined
Vapour Pressure	Not determined
Vapour density	Not determined
Relative density	Approx. 2.65
Solubility in / Miscibility with water	Not determined
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:	0
Specific Gravity (g/cm³)	0.096

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed. Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

No Information

10.5 Incompatible materials

Strong oxidizing agents. Acids and bases. Amines.

10.6 Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapours. Alcohols. Exothermic reaction. Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50: No information available.

Inhalation LC50: No information available.

Irritation: No information available.

Corrosivity: No information available.

Sensitization: No information available.

Repeated dose toxicity: No information available.

Carcinogenicity: No information available.

Mutagenicity: No information available.

Toxicity for reproduction: 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:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
25154-52-3	Nonylphenol	1620 mg/kg oral		
9046-10-0	polyoxypropylenediamine	2855 mg/kg, rat	2980 mg/kg, rabbit	
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	2169 mg/kg oral		

Additional Information:

No Information

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

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
25154-52-3	Nonylphenol	0.0848 mg/l	No information	0.128 mg/l
9046-10-0	polyoxypropylenediamine	No information	No information	Not available
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	No information	No information	Not available
71074-89-0	bis (dimethylaminomethyl) phenol	No information	No information	Not available

13. Disposal Considerations

13.1 **WASTE TREATMENT METHODS:** If recycling is not practicable, dispose of in compliance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

14.1 UN number	2735
14.2 UN proper shipping name	Amines, liquid, corrosive n.o.s
Technical name	Not applicable
14.3 Transport hazard class(es)	8
Subsidiary shipping hazard	Not applicable
14.4 Packing group	II
14.5 Environmental hazards	Yes
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
14.8 ADG Hazchem Code	2X

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:	Not available
Danish MAL Code - Mixture:	Not available
Sweden Product Registration Number:	Not available
Norway Product Registration Number:	Not available
WGK Class:	Not available

15.2 **Chemical Safety Assessment:**

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

16. Other Information

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

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Reasons for revision

No Information

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.