

Safety Data Sheet
according to Regulation (EC)
No. 453/2010



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

1.1 Product Identifier	06N250B	Revision Date:	06/07/2015
Product Name:	EPIGARD (Base)	Supersedes Date:	15/05/2015

1.2 Relevant identified uses of the substance or mixture and uses advised against Base component of 2 components coatings - Industrial use.

1.3 Details of the supplier of the safety data sheet

Manufacturer: USL
Kingston House
3 Walton Road
Pattinson North
Washington
Tyne & Wear
NE38 8QA
Regulatory / Technical Information:
+44(0)191 416 1530
www.usluk.com

Datasheet Produced by: Norton, Catherine - info@usluk.com

1.4 Emergency telephone number: CHEMTREC +1 703 5273887 (Outside US)

2. Hazard Identification

2.1 Classification of the substance or mixture

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

HAZARD STATEMENTS

Hazardous to the aquatic environment, Chronic, category 3	H412
Eye Irritation, category 2	H319
Skin Irritation, category 2	H315
Skin Sensitizer, category 1	H317

2.2 Label elements

Symbol(s) of Product



Signal Word

Warning

Named Chemicals on Label

epoxy resin based on bisphenol f, reaction product: bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)

HAZARD STATEMENTS

Hazardous to the aquatic environment, Chronic, category 3	H412	Harmful to aquatic life with long lasting effects.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Skin Irritation, category 2	H315	Causes skin irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

PRECAUTION PHRASES

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
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.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.

2.3 Other hazards

Not applicable

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>EINEC No.</u>	<u>Name According to EEC</u>	<u>%</u>
25068-38-6	500-033-5	reaction product: bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)	10-25
9003-36-5	500-006-8	epoxy resin based on bisphenol f	2.5-10
1317-61-9	215-277-5	iron oxide	2.5-10
1317-65-3	215-279-6	limestone	1.0-2.5
112945-52-5	231-545-4	silicon dioxide, crystalline-free	0.1-1.0

<u>CAS-No.</u>	<u>REACH Reg No.</u>	<u>CLP Symbols</u>	<u>CLP Hazard Statements</u>	<u>M-Factors</u>
25068-38-6	01-2119456619-26	GHS07-GHS09	H315-317-319-411	
9003-36-5	01-2119454392-40	GHS07-GHS09	H315-317-411	
1317-61-9		GHS02	H252	
1317-65-3		GHS07	H315-319	
112945-52-5	01-2119379499-16			

Additional Information:

The text for CLP 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.

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

May cause long-term adverse effects in the aquatic environment.

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:

Alcohol Foam, Carbon Dioxide, Dry Chemical, Water Fog

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

FURTHER INSTRUCTIONS: Please refer to EU 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

Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. 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: No Information

STORAGE CONDITIONS: Store in original container. 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 (UK WELS)

Name	%	LTEL ppm	STEL ppm	STEL mg/m ³	LTEL mg/m ³	OEL Note
reaction product: bisphenol-a-(epichlorhydrin)		10-25				
epoxy resin (number average molecularweight <= 700)						
epoxy resin based on bisphenol f		2.5-10				
iron oxide		2.5-10				
limestone		1.0-2.5			4, 10	Respirable Dust, Total Inhalable
silicon dioxide, crystalline-free		0.1-1.0				

FURTHER ADVICE: Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified at the EU level under the dangerous substances and preparations regulation.

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.

Chemical Name:

reaction product: bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)

EC No.:
500-033-5

CAS-No.:
25068-38-6

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	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					0.75 mg/kg		0.75 mg/kg
Inhalation		12.3 mg/mE		12.3 mg/kg		0.75 mg/mE		0.75 mg/mE
Dermal		8.3 mg/kg		8.3 mg/kg		3.6 mg/kg		3.6 mg/kg

PNEC' s - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	31 g/l
Fresh water sediments	0.5 mg/kg
Marine water	0.31 g/l
Marine sediments	0.5 mg/kg
Food chain	
Microorganisms in sewage treatment	10 mg/l
soil (agricultural)	
Air	

Chemical Name:

epoxy resin based on bisphenol f

EC No.:

500-006-8

CAS-No.:

9003-36-5

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	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							6.25 mg/kg
Inhalation				29.39 mg/mE				8.7 mg/mE
Dermal		8.3 g/cm ²		104.15 mg/kg				62.5 mg/kg

PNEC' s - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.003 mg/l
Fresh water sediments	0.294 mg/kg
Marine water	0.0003 mg/l
Marine sediments	0.0294 mg/kg
Food chain	
Microorganisms in sewage treatment soil (agricultural)	10 mg/l
Air	0.237 mg/kg

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

Appearance:	Black liquid
Physical State	Liquid
Odor	Mild
Odor threshold	Not determined
pH	Not determined
Melting point / freezing point (é C)	Not determined
Boiling point/range (é C)	200 - N.D.
Flash Point, (é C)	100
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	10 - 20
Vapour Pressure	Not determined
Vapour density	Not determined
Relative density	Not determined
Solubility in / Miscibility with water	Immiscible in water
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (é C)	Not determined
Decomposition temperature (é 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/cm ³)	1.300

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:

Inhalation LC50:

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.

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:

<u>CAS-No.</u>	<u>Name According to EEC</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
25068-38-6	reaction product: bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)	5000 mg/kg rat, oral	5000	
112945-52-5	silicon dioxide, crystalline-free	10000 mg/kg, oral, rat		

Additional Information:

No Information

12. Ecological Information

12.1 Toxicity:	
EC 50 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>Name According to EEC</u>	<u>EC 50 48hr</u>	<u>IC 50 72hr</u>	<u>LC 50 96hr</u>
25068-38-6	reaction product: bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)	No information	No information	
9003-36-5	epoxy resin based on bisphenol f	No information	No information	
1317-61-9	iron oxide	No information	No information	
1317-65-3	limestone	No information	No information	
112945-52-5	silicon dioxide, crystalline-free	No information	No information	

Further Ecological Information

Contains the following ingredients which are classified as water dangerous according to EEC directive No. 76/464/EEC in percentages > 1%.

<u>CAS-No.</u>	<u>Name According to EEC</u>
25068-38-6	reaction product: bisphenol-a-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)
9003-36-5	epoxy resin based on bisphenol f

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.

European Waste Code: No Information
Packaging Waste Code: No Information

14. Transport Information

14.1	UN number	3082
14.2	UN proper shipping name	Environmentally hazardous substance, liquid, NO.S. (contains epoxy resin)
	Technical name	
14.3	Transport hazard class(es)	
	Subsidiary shipping hazard	
14.4	Packing group	III
14.5	Environmental hazards	
14.6	Special precautions for user	Not applicable
	EmS-No.:	
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Not applicable

15. Regulatory Information

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

National Regulations:

Denmark Product Registration Number:

Danish MAL Code:

Sweden Product Registration Number:

Norway Product Registration Number:

WGK Class:

Chemical Safety Assessment:

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

16. Other Information

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

H252	Self-heating in large quantities; may catch fire
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

Reasons for revision

This is a new Safety Data Sheet (SDS).

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
 ESIS (The European Chemical Substances Information System), provided by the European Commission
 Joint Research Centre in Ispra, Italy
 Annex VI of the EU Council Directive 67/548/EEC
 Council Directive 67/548/EEC - Annex I or EU Council Directive 1999/45/EC
 European Union (EC) Regulation No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation)

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/m ³	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

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.

Safety Data Sheet
according to Regulation (EC)
No. 453/2010



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

1.1 Product Identifier	06N250H	Revision Date:	06/07/2015
Product Name:	EPIGARD (Hardener)	Supersedes Date:	25/06/2015

1.2 Relevant identified uses of the substance or mixture and uses advised against Hardener for 2 components coatings - Industrial use.

1.3 Details of the supplier of the safety data sheet

Manufacturer: USL
 Kingston House
 3 Walton Road
 Pattinson North
 Washington
 Tyne & Wear
 NE38 8QA
 Regulatory / Technical Information:
 +44(0)191 416 1530
 www.usluk.com

Datasheet Produced by: Norton, Catherine - info@usluk.com

1.4 Emergency telephone number: CHEMTREC +1 703 5273887 (Outside US)

2. Hazard Identification

2.1 Classification of the substance or mixture

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

HAZARD STATEMENTS

Acute Toxicity, Oral, category 4	H302
Acute Toxicity, Inhalation, category 4	H332
Hazardous to the aquatic environment, Chronic, category 2	H411
Flammable Liquid, category 3	H226
Skin Corrosion, category 1	H314-1
Skin Sensitizer, category 1	H317

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

benzyl alcohol, diethylenetriamine, tetraethylenepentamine, benzene-1, 3-dimethanamine, 3-aminomethyl-3,5,5-trimethylcyclohexylamine, phenol, styrenated, fatty acids, tall-oil, reaction products with tetraethylenepentamine

HAZARD STATEMENTS

Acute Toxicity, Oral, category 4	H302	Harmful if swallowed.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
Hazardous to the aquatic environment, Chronic, category 2	H411	Toxic to aquatic life with long lasting effects.
Flammable Liquid, category 3	H226	Flammable liquid and vapour.
Skin Corrosion, category 1	H314-1	Causes severe skin burns and eye damage.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.

PRECAUTION PHRASES

P210	Keep away from heat/sparks/open flames/hot surfaces. ⁻ No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.
P403+233	Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards

Not applicable

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>EINEC No.</u>	<u>Name According to EEC</u>	<u>%</u>
100-51-6	202-859-9	benzyl alcohol	25-50
64742-95-6	265-199-0	hydrocarbons, c9, aromatics	10-25
2855-13-2	220-666-8	3-aminomethyl-3,5,5-trimethylcyclohexylamine	10-25
68953-36-6	273-201-6	fatty acids, tall-oil, reaction products with tetraethylenepentamine	2.5-10
111-40-0	203-865-4	diethylenetriamine	2.5-10
1477-55-0	216-032-5	benzene-1, 3-dimethanamine	2.5-10

61788-44-1	252-975-0	phenol, styrenated	2.5-10
108-67-8	203-604-4	mesitylene	1.0-2.5
112-57-2	203-986-2	tetraethylenepentamine	1.0-2.5
2530-83-8	219-784-2	silane, 3-(glycidyoxy) propyl	1.0-2.5
100-41-4	202-849-4	ethylbenzene	<0.1
67-56-1	200-659-6	methanol	<0.1
71-43-2	200-753-7	benzene	<0.1

<u>CAS-No.</u>	<u>REACH Reg No.</u>	<u>CLP Symbols</u>	<u>CLP Hazard Statements</u>	<u>M-Factors</u>
100-51-6	01-2119492630-38	GHS07	H302-319-332	
64742-95-6	01-2119455851-35	GHS02-GHS07-GHS08-GHS09	H226-304-335-336-411	
2855-13-2		GHS05-GHS07	H302-312-314-317-412	
68953-36-6		GHS05-GHS07-GHS09	H317-318-411	
111-40-0	01-2119473793-27	GHS05-GHS06	H302-312-314-317-331	
61788-44-1	02-2119629611-43-xxxx	GHS07-GHS09	H315-317-411	
1477-55-0		GHS05-GHS07	H302-314-317-332-412	
108-67-8		GHS02-GHS07-GHS09	H226-335-411	
112-57-2		GHS05-GHS07-GHS09	H302-312-314-317-411	
2530-83-8		GHS05	H318	
100-41-4		GHS02-GHS07-GHS08	H225-304-315-319-332-373	
67-56-1		GHS02-GHS06-GHS08	H225-311-331-370	
71-43-2		GHS02-GHS07-GHS08	H225-304-315-319-340-350-372	

Additional Information: The text for CLP 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.

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

Harmful by inhalation. Do not ingest. Irritating to eyes and skin. Risk of serious damage to the lungs (by aspiration). Vapours may cause drowsiness and dizziness.

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:

Alcohol Foam, Carbon Dioxide, Dry Chemical, Water Fog

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

5.2 Special hazards arising from the substance or mixture

Flammable.

5.3 Advice for firefighters

Flash back possible over considerable distance. 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.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Remove all sources of ignition.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

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.

7. Handling and Storage

7.1 Precautions for safe handling

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Electrical equipment should be protected to the appropriate standard. Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Use only in area provided with appropriate exhaust ventilation. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment. Do not breathe vapours or spray mist. Use only explosion-proof equipment. Keep away from sources of ignition - No smoking. 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: Direct sources of heat.

STORAGE CONDITIONS: Store in original container. 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 (UK WELS)

<u>Name</u>	<u>%</u>	<u>LTEL ppm</u>	<u>STEL ppm</u>	<u>STEL mg/m³</u>	<u>LTEL mg/m³</u>	<u>OEL Note</u>
benzyl alcohol	25-50					
hydrocarbons, c9, aromatics	10-25					
3-aminomethyl-3,5,5-trimethylcyclohexylamine	10-25					
fatty acids, tall-oil, reaction products with tetraethylenepentamine	2.5-10					
diethylenetriamine	2.5-10	1			4.3	
benzene-1, 3-dimethanamine	2.5-10					
phenol, styrenated	2.5-10					
mesitylene	1.0-2.5					
tetraethylenepentamine	1.0-2.5					
silane, 3-(glycidyl)oxy propyl	1.0-2.5					
ethylbenzene	<0.1	100	125	552	441	
methanol	<0.1	200	250	333	266	
benzene	<0.1	1			3.25	

FURTHER ADVICE: Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified at the EU level under the dangerous substances and preparations regulation.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator. Use only with ventilation to keep levels below exposure guidelines reported in this document. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use State or federally approved supplied air respirator. For silica containing coatings in a liquid state, and/or if no exposure limits are established above, air-supplied respirators are generally not required.

EYE PROTECTION: Tightly fitting safety goggles. Face-shield.

HAND PROTECTION: Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Impervious 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.

Chemical Name:

benzyl alcohol

EC No.:

202-859-9

CAS-No.:

100-51-6

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	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					25 mg/kg		5 mg/kg
Inhalation		450 mg/mE		90 mg/mE		95.5 mg/mE		19.1 mg/mE
Dermal		47 mg/kg		47 mg/kg		28.5 mg/kg		5.7 mg/kg

PNEC' s - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	1.0 mg/l
Fresh water sediments	5.27 ,g/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:

hydrocarbons, c9, aromatics

EC No.:

265-199-0

CAS-No.:

64742-95-6

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	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				150 mg/mE				32 mg/mE
Dermal				25 mg/kg bw/day				11 mg/kg bw/day

PNEC' s - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	
Fresh water sediments	
Marine water	
Marine sediments	
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	
Air	

Chemical Name:

3-aminomethyl-3,5,5-trimethylcyclohexylamine

EC No.:

220-666-8

CAS-No.:

2855-13-2

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	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								
Dermal								

PNEC' s - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.06 mg/l
Fresh water sediments	5.784 mg/kg
Marine water	0.006 mg/l
Marine sediments	0.578 mg/kg
Food chain	
Microorganisms in sewage treatment soil (agricultural)	3.18 mg/kg
Air	1.121 mg/kg

Chemical Name:

diethylenetriamine

EC No.:

203-865-4

CAS-No.:

111-40-0

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	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	2.6 mg/mE	92.1 mg/mE	0.87 mg/mE	15.4 mg/mE		27.5 mg/mE		4.6 mg/mE
Dermal		11.4 mg/kg/day	1.1 mg/cm ²					4.88 mg/kg/day

PNEC' s - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.56 mg/l
Fresh water sediments	1072 mg/kg
Marine water	0.056 mg/l
Marine sediments	107.2 mg/kg
Food chain	
Microorganisms in sewage treatment soil (agricultural)	6 mg/l
Air	214 mg/kg

Chemical Name:

methanol

EC No.:

200-659-6

CAS-No.:

67-56-1

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	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					8 mg/kg bw/day		8 mg/kg bw/day
Inhalation	260 mg/m ³	260 mg/m ³	260 mg/m ³	260 mg/m ³	50 mg/m ³	50 mg/m ³	50 mg/m ³	50 mg/m ³
Dermal		40 mg/kg bw/day		40 mg/kg bw/day		8 mg/kg bw/day		8 mg/kg bw/day

PNEC' s - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	154 mg/l
Fresh water sediments	570.4 mg/kg
Marine water	15.4 mg/l
Marine sediments	570.4 mg/kg
Food chain	
Microorganisms in sewage treatment	100 mg/l
soil (agricultural)	23.5 mg/kg
Air	

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

Appearance:	Clear liquid
Physical State	Liquid
Odor	Aromatic/Amine-type
Odor threshold	Not determined
pH	Not determined
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	155 - 181
Flash Point, (°C)	41
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	10 - 20
Vapour Pressure	Not determined
Vapour density	Not determined
Relative density	Not determined
Solubility in / Miscibility with water	immiscible in water
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	>450°C
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)	1.050

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under recommended storage conditions. Risk of ignition. Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur. Hazardous polymerisation may occur.

10.4 Conditions to avoid

Direct sources of heat.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

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:

Inhalation LC50:

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.

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
100-51-6	benzyl alcohol	1230 mg/kg rat, oral		1000 ppm/8hrs rat, inhalation
64742-95-6	hydrocarbons, c9, aromatics	3592 mg/kg	> 3160 mg/kg	> 6193 mg/m ³
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	1030 mg/kg oral		

68953-36-6	fatty acids, tall-oil, reaction products with tetraethylenepentamine	4750 mg/kg oral, rat		
111-40-0	diethylenetriamine	1080 mg/kg, oral, rat	1090 mg/kg	10 mg/L / 1 hour, inh, rat
1477-55-0	benzene-1, 3-dimethanamine	1514 mg/kg, oral		
100-41-4	ethylbenzene	3500 mg/kg rat, oral		
67-56-1	methanol	2080 mg/kg rat oral		

Additional Information:

No Information

12. Ecological Information

12.1 Toxicity:

EC 50 48hr (Daphnia):	No information
IC50 72hr (Algae):	No information
LC 50 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>Name According to EEC</u>	<u>EC 50 48hr</u>	<u>IC 50 72hr</u>	<u>LC 50 96hr</u>
100-51-6	benzyl alcohol	No information	700 mg/L (algae)	10 mg/L (fish)
64742-95-6	hydrocarbons, c9, aromatics	No information	No information	9,2 mg/l
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	No information	No information	
68953-36-6	fatty acids, tall-oil, reaction products with tetraethylenepentamine	No information	No information	
111-40-0	diethylenetriamine	780 mg/l	No information	430 mg/l
61788-44-1	phenol, styrenated	No information	No information	
1477-55-0	benzene-1, 3-dimethanamine	No information	No information	
108-67-8	mesitylene	No information	No information	
112-57-2	tetraethylenepentamine	No information	No information	
2530-83-8	silane, 3-(glycidylloxy) propyl	No information	No information	
100-41-4	ethylbenzene	No information	No information	
67-56-1	methanol	No information	No information	
71-43-2	benzene	No information	No information	

Further Ecological Information

Contains the following ingredients which are classified as water dangerous according to EEC directive No. 76/464/EEC in percentages > 1%.

<u>CAS-No.</u>	<u>Name According to EEC</u>
64742-95-6	hydrocarbons, c9, aromatics
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine
68953-36-6	fatty acids, tall-oil, reaction products with tetraethylenepentamine
1477-55-0	benzene-1, 3-dimethanamine
61788-44-1	phenol, styrenated
108-67-8	mesitylene

112-57-2

tetraethylenepentamine

13. Disposal Considerations

13.1 WASTE TREATMENT METHODS: Do not burn, or use a cutting torch on, the empty drum. 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.

European Waste Code: No Information

Packaging Waste Code: No Information

14. Transport Information

14.1	UN number	2920
14.2	UN proper shipping name	Corrosive liquid, flammable, N.O.S. (Mixed polyamines in Solvent Naptha)
	Technical name	
14.3	Transport hazard class(es)	8 + 3
	Subsidiary shipping hazard	3
14.4	Packing group	II
14.5	Environmental hazards	
14.6	Special precautions for user	Not applicable
	EmS-No.:	
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Not applicable

15. Regulatory Information

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

National Regulations:

Denmark Product Registration Number:

Danish MAL Code:

Sweden Product Registration Number:

Norway Product Registration Number:

WGK Class:

Chemical Safety Assessment:

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

16. Other Information

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

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
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.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Reasons for revision

This is a new Safety Data Sheet (SDS).

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
 ESIS (The European Chemical Substances Information System), provided by the European Commission
 Joint Research Centre in Ispra, Italy
 Annex VI of the EU Council Directive 67/548/EEC
 Council Directive 67/548/EEC - Annex I or EU Council Directive 1999/45/EC
 European Union (EC) Regulation No. 1272/2008 on the classification, labelling and packaging of
 substances and mixtures (CLP Regulation)
 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/m ³	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

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.