SAFETY DATA SHEET

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

1.1 Product identifier

Product Name **Bund Coat - Resin**

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

Identified uses Resin. Adhesive.

1.3 Details of the supplier of the safety data sheet

Supplier Eli-Chem Resins UK Ltd.
Astra House
The Common
Cranleigh
GU6 8RZ
United Kingdom
01483 266636
support@FixMaster.co.uk

1.4 Emergency telephone 01483 266636 (office hours only) **number**

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (EC 1272/2008)
Physical and Chemical Hazards Not classified.
Human health Skin irrit. 2 – H315: Eye irrit. 2 – H319; Skin Sens. 1 – H317
Environment Aquatic Chronic 2 – H411
Classification (1999/45/EEC) Xi: R36/38, R43. N; R51/53.
The full text for all R-phrases and Hazard statements are displayed in Section 16.

2.2 Label elements

Contains BISPHENOL F TYPE EPOXY RESIN
EPOXY RESIN (Number average MW <= 700)
OXIRANE, MONO [(C12-14- ALKYLOXY)METHYL] DERIVS Label
In Accordance With (EC) No. 1272/2008

Signal Word Warning
Hazard Statements 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.

Precautionary Statements

P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+351-338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313 Get medical advice/attention.
P501 Dispose to licensed waste disposal site in accordance with local Waste Disposal Authority.

Supplemental label information

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash … thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace. IF ON SKIN: Wash with plenty of soap and water.
P321 Specific treatment (see ... on this label).
P332+313 If skin irritation occurs: Get medical advice/attention.
P333+313 If skin irritation or rash occurs: Get medical advice/attention.
P337 If eye irritation persists:
P362 Take off contaminated clothing and wash before reuse.
P363Wash contaminated clothing before reuse. P391
Collect spillage.

Supplemental label information

EUH205 Contains epoxy constituents. May produce an allergic reaction.

2.3 Other hazards

Not Classified as PBT/vPvB by current EU criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

BISPHENOL F TYPE EPOXY RESIN	15 – 17%
CAS-No.: 28064-14-4 EC No:	

Classification (EC 1272/2008) Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Anuatic Chronic 2 - H411	Classification 67/548/EEC) R43 Xi; R36/38 N; R51/53

EPOXY RESIN (Number average MW <= 700) 70 - 80% CAS-No.: 25068-38-6 EC No: 500-033-5	
Classification (EC 1272/2008) Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Anuatic Chronic 2 - H411	Classification 67/548/EEC) R43 Xi; R36/38 N; R51/53

OXIRANE, MONO (C12-14- ALKYLOXY)METHYL) DERIVS 15 - 17% CAS-No.: 68609-97-2 EC No:	
Classification (EC 1272/2008) Skin Irrit. 2 - H315 Skin Sens. 1 - H317	Classification 67/548/EEC) R43 Xi; R36/38

The full text for all R-phrases and hazard statements are displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information
CAUTION! First aid personnel must be aware of own risk during rescue! Consult a physician for specific advice.
Inhalation
Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion
DO NOT INDUCE VOMITING! Get medical attention immediately! Skin
contact
Remove contaminated clothing immediately and wash skin with soap and water: Get medical attention if any discomfort continues. Eye contact
Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention immediately. Continue to rinse.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation
May cause irritation to the respiratory system.
Ingestion
No specific symptoms noted.
Skin contact
Skin irritation. Allergic rash.
Eye contact
Irritating and may cause redness and pain.

4.3 Indication of any immediate medical attention and special treatment needed

Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Inhalation
May cause irritation to the respiratory system.
Ingestion
No specific symptoms noted.
Skin contact
Skin irritation. Allergic rash.
Eye contact
Irritating and may cause redness and pain.

5.2 Special hazards arising from the substance or mixture

Unusual Fire & Explosion Hazards
Heat may cause the containers to explode.
Specific hazards
In case of fire, toxic gases may be formed. Phenolic. Carbon monoxide (CO). Water.

5.3 Advice for firefighters

Special Fire Fighting Procedures
Move container from fire area if it can be done without risk. Water spray should be used to cool containers. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control. Dike and collect extinguishing water.
Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions. protective equipment and emergency procedures
Wear protective clothing as described in Section 8 of this safety data sheet. Do not smoke, use open fire or other sources of ignition. Avoid inhalation of vapours and contact with skin and eyes.

6.2 Environmental precautions
Avoid discharge into drains, water courses or onto the ground. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

6.3 Methods and material for containment and cleaning up
Absorb with sand or other inert absorbent. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. See section 11 for additional information on health hazards. Collect and dispose of spillage as indicated in section 13.

SECTION 7: HANDLING AND STORAGE

7. 1 Precautions for safe handling
Keep away from heat, sparks and open flame. Wear full protective clothing for prolonged exposure and/or high concentrations. Provide good ventilation. Avoid inhalation of vapours/spray and contact with skin and eyes. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site.

7.2 Conditions for safe storage, including any incompatibilities
Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from food, drink and animal feeding stuffs. Keep away from heat, sparks and open flame.

7.2 Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
Keep away from heat, sparks and open flame. Wear full protective clothing for prolonged exposure and/or high concentrations. Provide good ventilation. Avoid inhalation of vapours/spray and contact with skin and eyes. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site.

7.2 Conditions for safe storage. including any incompatibilities
Store in tightly closed original container in a dry,, cool and well-ventilated place. Keep away from food, drink and animal feeding stuffs.
Keep away from heat, sparks and open flame.

7.3 Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Ingredient Comments
No exposure limits noted for ingredient(s).

8.2 Exposure controls

Protective equipment



Engineering measures
Provide adequate general and local exhaust ventilation.
Respiratory equipment
In case of inadequate ventilation use suitable respirator.
Hand protection

Protective gloves are recommended. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Eye protection

Wear goggles/face shield.

Other Protection

Provide eyewash station and safety shower. *Hygiene measures*

Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash hands after contact. Wash hands after handling.

Skin protection

Wear apron or protective clothing in case of contact.

Environmental Exposure Controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Liquid
Colour	Various colours
Odour	Mild
Solubility	Insoluble in water
Initial boiling point and boiling range (°C)	>200
Relative density	1.12 g/cm^3 20 C
Evaporation rate	Not available
Viscosity	1200 – 1600 cP 25 C
Decomposition temperature (°C)	Not available
Odour threshold, lower	Not available
Odour threshold, upper	Not available
Flashpoint (°C)	> 150 CC (Closed cup)
Auto ignition temperature (°C)	Not determined
Flammability Limit – lower (%)	Not determined
Flammability Limit – upper (%)	Not determined
Partition Coefficient (N-Octanol/Water)	log Pow - 3.242 (CAS 25068-38-6) 3-5 (CAS 28064-14-4) 3.77 (CAS 68609-97-2)
Explosive properties	No data available
Oxidising properties	Not available

9.2 Other Information

Not available. Not determined.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No specific reactivity hazards associated with this product.

10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

10.3 Possibility of hazardous reactions

Hazardous Polymerisation May
polymerise.
Polymerisation Description
Avoid heat. Avoid contact with: Amines.

10.4 Conditions to avoid

Avoid heat, flames and other sources of ignition.

10.5 Incompatible materials

Material to avoid
Strong acids. Strong oxidizing substances. Amines. Strong alkalis.

10.6 Hazardous decomposition products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Phenolic. Water. Carbon monoxide (CO).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxic Dose 1 - LD 50
>2000 mg/kg (oral rat)
Other Health Effects
This substance has no evidence of carcinogenic properties.

Acute toxicity:
Acute Toxicity (Dermal LD50)
> 2000 mg/kg Rabbit
Acute Toxicity (Inhalation LC50) Not
determined.

Respiratory or skin sensitisation:
Skin sensitisation Guinea
Pig
Sensitising.

Germ cell mutagenicity:
Genotoxicity - In Vitro Not available.
Genotoxicity - In Vivo Not available.

Reproductive Toxicity:
Reproductive Toxicity - Fertility
Not available.
Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure:
STOT - Single exposure Not available.

Specific target organ toxicity - repeated exposure:
STOT - Repeated exposure Not available.

Inhalation
May cause irritation to the respiratory system.

Ingestion
No specific health warnings noted.

Skin contact
Irritating to skin. May cause sensitization by skin contact.

Eye contact
Irritating to eyes.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

12.1 Toxicity

LG 50, 96 Hrs, Fish mg/l	(GAS 25068-38-6) 2 mg/l (GAS 68609-97-2) >5000 mg/l
EC 50, 48 Hrs. Daphnia, mg/l	(GAS 25068-38-6) 2 mg/l (GAS 68609-97-2) >5000 mg/l
Acute Toxicity - Aquatic Plants	Not available.
Acute Toxicity – Microorganisms	Not available.
Chronic Toxicity - Fish Early life Stage	Not available.

Chronic Toxicity - Aquatic Invertebrates NOEC 21 days (GAS 25068-38-6) 0.3 mg/l Daphnia magna Acute Toxicity – Terrestrial Not available.

12.2 Persistence and degradability

Degradability
The product is not readily biodegradable. *Biodegradation*

Degradation (12%) (GAS 25068-38-6) 28 days
Degradation (87%) (GAS 68609-97-2) 28 days

12.3 Bioaccumulative potential

Bioaccumulation factor
BCF 160 (GAS 68609-97-2)
Partition coefficient
log Pow - 3.242 (CAS 25068-38-6) 3-5 (GAS 28064-14-4) 3.77 (GAS 68609-97-2)

12.4 Mobility in soil

Mobility:
No data available.
Absorption/desorption Coefficient
Soil Koc - 1, 800-4, 400 (GAS 25068-38-6) >5000 (GAS 68609-97-2)

12.5 Results f PBT and vPvB assessment

Not classified as PBT/vPvB by current EU criteria.

12.6 Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

General information
Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

13.1 Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION

14.1 UN Number

UN No. (ADRIRID/ADN)	3082
UN No. (IMDG)	3082
UN No. (ICAO)	3082

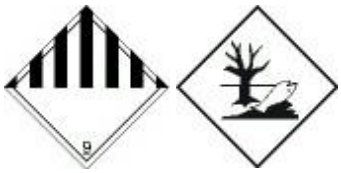
14.2 UN proper shipping name

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)

14.3 Transport hazard class(es)

ADR/RID/ADN Class	9
ADR/RID/ADN Class	Class 9: Miscellaneous dangerous substances and articles.
ADR Label No.	9
IMDG Class	9
ICAO Class/Division	9

Transport labels



14.4 Packing group

ADR/RID/ADN Packing group	III
IMDG Packing group	III
ICAO Packing group	III

14.5 Environmental hazards

Environmentally Hazardous substance/marine pollutant

14.6 Special precautions for user

EMS	F-A, S-F
Emergency Action Code	3Z
Hazard No. (ADR)	90
Tunnel Restriction Code (E)	

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 specific for the substance or mixture

UK Regulatory References
Health and Safety at Work Act 1974. The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments. Chemicals (Hazard Information & Packaging) Regulations.

Environmental Listing
Control of Pollution Act 1974. Rivers (Prevention of Pollution) Act 1961. Statutory Instruments
The Chemicals (Hazard lnformation and Packaging for Supply) Regulations 2009 (S.1 2009 No. 716). Control of Substances Hazardous to Health.
Approved Code Of Practice
Safety Data Sheets for Substances and Preparations. Classification and Labelling of Substances and Preparations Dangerous for Supply. Guidance Notes
CHIP for everyone HSG(108). Introduction to Local Exhaust Ventilation HS(G)37. Workplace Exposure Limits EH40.
EU Legislation
Dangerous Preparations Directive 1999/45/EC.
National Regulations
The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002. No. 1689. Workplace Exposure Limits 2005 (EH40)
Health and Safety at Work Act (As Amended) 1974
Control of Substances Hazardous to Health Regulations 2002 (as amended)
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well.as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Issued By	HS & E Manager
Revision Date	21.11.13
Revision	10
Supersedes date	06.03.12
SDS No.	10013
Safety Data Sheet Status	Approved

Risk Phrases In Full	
R36/38	Irritating to eyes and skin.
R38	Irritating to skin.
R43	May cause sensitization by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Hazard Statements In Full	
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.

date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

SAFETY DATA SHEET

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

1.1 Product identifier

Product Name Bund Coat - Hardener

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

No further relevant information available.
Application of the substance / the mixture Hardening agent/ Curing agent

1.3 Details of the supplier of the safety data sheet

Supplier
Eli-Chem Resins UK Ltd
Astra House
The Common
Cranleigh
GU6 8RZ
01483 266636
support@FixMaster.co.uk

1.4 Emergency telephone Number 01483 266636 (office hours)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (EC 1272/2008)

GHS05 corrosion

Skin Corr. 1B	H314 Causes severe skin burns and eye damage.
Eye Dam. 1	H318 Causes serious eye damage.

GHS07

Acute Tox. 4	H302 Harmful if swallowed.
Acute Tox. 4	H332 Harmful if inhaled.
Skin Sens. 1	H317 May cause an allergic skin reaction.
Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Label In Accordance With (EC) No. 1272/2008
The product is classified according to the CLP regulation.
Hazard pictograms


GHS05


GHS07

Signal word Danger

Hazard-determining components of labeling:
Benzyl alcohol
3-aminomethyl-3,5,5-trimethylcyclohexylamine Modified Cycloaliphatic Polyamine Adducts ***Hazard statements***

H302+H332	Harmful if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
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/doctor.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable. vPvB: Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Description: **Mixture of the substances listed below with harmless additions**

CAS: 100-51-6 EINECS: 202-859-9	Benzyl alcohol Acute Tox. 4, H302; Acute Tox. 4, H332; Eye Irrit. 2, H319	25-<50%

CAS: 2855-13-2 EINECS: 220-666-8	3-aminomethyl-3,5,5-trimethylcyclohexylamine Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-<25%
CAS: 38294-64-3 NLP: 500-101-4	Modified cycloaliphatic polyamine adduct [4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine] Skin Corr. 1B, H314; Eye Dam. 1, H318; Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-<25%
CAS: 113930-69-1 NLP: 500-302-7	Modified cycloaliphatic polyamine adduct [4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)]	10-<25%
	Skin Corr. 1B, H314; Eye Dam. 1, H318; Aquatic Chronic 2, H411; Skin Sens. 1, H317	
CAS: 1477-55-0 EINECS: 216-032-5	m-phenylenebis(methylamine) Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-<25%
CAS: 61788-44-1 EINECS: 262-975-0	Phenol, styrolisiert Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	1-<6%

The full text for all R-phrases and hazard statements are displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. ***Inhalation***
In case of unconsciousness bring patient into stable side position for transport. Seek medical treatment in case of complaints. ***Ingestion***
Drink copious amounts of water and provide fresh air. Instantly call for doctor.
Skin contact
Immediately wash with water and soap and rinse thoroughly. Call a doctor immediately.
Eye contact
Immediately wash with water and soap and rinse thoroughly. Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing agents
CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

Carbon monoxide (CO) Carbon dioxide (CO2) Nitrogen oxides (NOx) Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters

Protective equipment
Use self-contained breathing apparatus and protective fire fighting clothing.
Additional information
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions. protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
6.2 Environmental precautions
Prevent liquid entering sewers, basements and workpits. Do not allow product to reach sewage system or water bodies.
6.3 Methods and material for containment and cleaning up
Absorb with liquid binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent. Dispose of contaminated material as waste according to item 13. Ensure adequate ventilation.
6.4 Reference to other sections
See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for information on disposal.

SECTION 7: HANDLING AND STORAGE

7. 1 Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and containers: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep container tightly sealed.

7.3 Specific end use(s)
No further relevant information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems: No further data; see item 7.

8.1 Control parameters

Components with critical values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

DNELs		
100-51-6 Benzyl alcohol		
Oral Dermal	DNEL – acute systemic effects DNEL – long-term systemic effects DNEL – acute systemic effects DNEL – long-term systemic effects	25 mg/kg bw/day (consumer) 5 mg/kg bw/day (consumer)

PNECs	
100-51-6 Benzyl alcohol	
PNEC	0.456 mg/kg dry weight (soil) 39 mg/l (sewage treatment plant)
	0.1 mg/l (marine water) 0.527 mg/kg dry weight (marine water sediment) 5.27 mg/kg dry weight (fresh water sediment) 2.3 mg/l (water (intermittent releases)) 1.0 mg/l (fresh water) 25 mg/kg bw/day (consumer) 5 mg/kg bw/day (consumer)
2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine	
PNEC	1.121 mg/kg dry weight (soil) 3.18 mg/l (sewage treatment plant) 0.006 mg/l (marine water) 0.578 mg/kg dry weight (marine water sediment) 5.784 mg/kg dry weight (fresh water sediment) 0.23 mg/l (water (intermittent releases)) 0.06 mg/l (fresh water)

8.2 Exposure controls

Personal protective equipment
General protective and hygienic measures
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Breathing equipment: Not necessary if room is well-ventilated.
Protection of hands: Protective gloves.
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. ***Penetration time of glove material***

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection: Tightly sealed safety glasses.
Body protection: Protective work clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Liquid
Colour	Clear
Odour	Amine-like
Solubility	Insoluble in water
Boiling point and boiling range (°C)	>200
Self-inflammability	Product is not selfigniting
Danger of explosion	Product is not explosive
Steam pressure at 20 °C	0.1 hPa
Density at 20 °C	1.05 g/ cm^3
Solubility in/Miscibility with Water:	
Dynamic at 20 °C	200mPas

9.2 Other Information

No further relevant information available.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Reacts with strong acids and oxidizing agents.

10.2 Chemical stability

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

No dangerous reactions known.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

No dangerous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

LD/LC50 values that are relevant for classification:		
100-51-6 Benzyl alcohol		
Oral Dermal Inhalative	LD50 LD50 LC50/4h	1300 mg/kg (rat) 2000 mg/kg (rabbit) >4.178 mg/l (rat) (OECD)
2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine		
Oral	LD50	1030 mg/kg (rat)
1477-55-0 m-phenylenebis(methylamine)		
Oral Dermal	LD50 LD50	93- mg/kg (rat) >2000 mg/kg (rabbit) (OECD 402)
61788-44-1 Phenol, styrolisiert		
Oral Dermal	LD50 LD50	>2000 mg/kg (rabbit) (OECD 423) >2000 mg/kg (rabbit) (OECD 402)

Primary irritant effect:
Skin corrosion/irritation Caustic effect on skin and mucous membranes. ***Serious eye damage/irritation*** Strong caustic effect.
Respiratory or skin sensitization Sensitisation possible by skin contact.
Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Harmful
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
Acute effects (acute toxicity, irritation and corrosivity) No further relevant information available.
Sensitisation Sensitization possible by skin contact.
Repeated dose toxicity No further relevant information available.
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction) No further relevant information available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity:
100-51-6 Benzyl alcohol

EC50 / 24 h	390 mg/ (bacteria) (ISO 8192)
EC50 / 48 h	230 mg/l (daphnia magna) (OECD 202)
IC50 / 72 h	700 mg/l (algae (pseudokirchneriella subcapitata)) (OECD 201)
LC50 / 96 h	460 mg/l (fish (pimephales promelas)) (OECD 201)
2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine	
EC10 EC50 / 48 h static) EC50 / 72 h LC50 / 96 h	1120 mg/l (activated sludge) (18 h; DIN 38412, 8) 23 mg/l (daphnia magna) (OECD 202, 1) > 50 mg/l (algae (scenedesmus subspicatus)) (88/302/EWG, C) 110 mg/l (fish (leuciscus idus)) (84/449/EWG, C.1)
1477-55-0 m-phenylenebis(methylamine)	
EC50 / 3 h EC50 / 48 h EC50 / 72 h LC50 / 96 h	> 1000 mg/l (activated sludge) (OECD 209) LD50 15.2 mg/l (daphnia magna) (OECD 202) 12 mg/l (algae (scenedesmus subspicatus)) (EbC50) 20.3 mg/l (algae (scenedesmus subspicatus)) (OECD 201) > 100 mg/l (fish (oncorhynchus mykiss))
61788-44-1 Phenol, styrolisiert	
EC50 / 48 h ErC50 / 72 h LC50 / 96 h	1-10 mg/l (daphnia magna) (EL50; OECD 202) LD50 3.14 mg/l (algae) (ErL50; OECD 201) 14.8 mg/l (fish) (LL50; OECD 211)

12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
Ecotoxical effects:
Remark: Harmful to fish.
Additional ecological information:
General notes:
Water hazard class 2 (): hazardous for water.
Do not allow product to reach ground water, water bodies or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into soil. Harmful
to aquatic organisms.
12.5 Results f PBT and vPvB assessment

PBT: Not applicable. vPvB:
Not applicable.

12.6 Other adverse effects

No further relevant information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recommendation Hand over to disposers of hazardous waste.

European waste catalogue	
07 07 99	Wastes not otherwise specified

Uncleaned packagings:
Recommendation Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 UN Number

UN No. ADR, IMDG, IATA 2735

14.2 UN proper shipping name

ADR 2735 AMINES , LIQUID, CORROSIVE, N.O.S. (Modified Cycloaliphatic Polyamine Adducts, ISOPHORONEDIAMINE)
IMDG, IATA AMINES, LIQUID, CORROSIVE, N.O.S. (Modified Cycloaliphatic Polyamine Adducts, ISOPHORONEDIAMINE)

14.3 Transport hazard class(es)

ADR

Class 8 (C7) Corrosive substances
Label 8

IMDG/IATA

Class 8 Corrosive substances
Label 8

14.4 Packing group

ADR/IMDG/IATA II

14.5 Environmental hazards

Marine pollutant No

14.6 Special precautions for user

Kemler Number:	Warning: Corrosive substances.
EMS Number:	F-A, S-B
Segregation groups:	Alkalis

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.
Transport/Additional Information:

ADR	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	E

IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN 'Model Regulation'	UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. (Modified Cycloaliphatic Polyamine Adducts, ISOPHORONEDIAMINE), 8, II

SECTION 15: REGULATORY INFORMATION

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

No further relevant information available.

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

The information contained herein is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases
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.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
Department issuing data specification sheet: Environment and safety department (U+S) ***Abbreviations and acronyms:***
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the
International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International
Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3 ***Sources***
Regulations
Directive 1999/45/EC, amended last by regulation (EC) No 1907/2006.
Directive 67/548/EEC, amended last by commission directive 2009/2/EG.
Regulation (EC) No 1907/2006, amended by (EU) Nr. 453/2010, amended last by commission regulation (EU) No 1272/2013.
Regulation (EC) No 1272/2008, amended last by commission regulation (EU) No 944/2013.
. **** Data compared to the previous version altered.*** GB