SAFETY DATA SHEET
IN2 EPOXY INFUSION RESIN

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product name	IN2 Epoxy Infusion Resin
Company	Easy Composites Ltd Unit 39 Park Hall Business Village Longton, Stoke-on-Trent ST3 5XA United Kingdom
Email	sales@easycomposites.co.uk
Telephone	+44 (0)1782 454499
Intended Use	As an infusion and laminating resin for GRP/CFRP composites.

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification - EC 1272/2008	H315: Causes skin irritation. H319: Causes serious eye irritation. H317: May cause an allergic skin reaction. H411: Toxic to aquatic life with long lasting effects.
Classification - 1999/45/EEC	R43: May cause sensitisation by skin contact. R36/38: Irritating to eyes and skin. R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Hazard pictograms

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	**Prevention:** P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/spray. P273 Avoid release to the environment. P280 Wear eye protection/ face protection. P280 Wear protective gloves. **Response:** P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention.
2.3 Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Product/ingredient name	CAS-No., EC-No., Registration No.	Conc. %	Classification 67/548/EEC	Classification 1272/2008 [CLP]
bisphenol-A- epichlorhydrin) and epoxy resin (number average molecular weight <= 700)	25068-38-6 01-2119456619-26	30 - 50	Xi; R36/38 R43 N; R51-R53	Eye Irrit. 2; H319 Skin Irrit. 2; H315 Skin Sens. 1; H317 Aqua. 2; H411
Epichlorohydrinformaldehyde-Phenol polymer number average molecular weight # 700	9003-36-5	30 - 50	Xi; R36/38 R43 N; R51/53	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aqua 2; H411
1,6-bis(2,3-epoxypropoxy)hexane	16096-31-4 240-260-4 01-2119463471-41	20 – 25	Xi; R36/38 Xi; R43 N; R52/53	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic 3; H412
propylene carbonate	108-32-7 203-572-1 01-2119537232-48	1 – 3	Xi; R36	Eye Irrit. 2; H319

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Keep warm and in a quiet place. Show this safety data sheet to the doctor in attendance. Take off all contaminated clothing immediately.
If inhaled	Move to fresh air. Keep patient warm and at rest. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician. If breathing is irregular or stopped, administer artificial respiration.
In case of skin contact	Wash off immediately with soap and plenty of water. Do NOT use solvents or thinners. If on clothes, remove clothes. If skin irritation persists, call a physician.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist. If easy to do, remove contact lens, if worn.
If swallowed	Keep at rest. Do not induce vomiting without medical advice. Keep respiratory tract clear. If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms irritant effects, Redness, sensitising effects

4.3 Indication of any immediate medical attention and special treatment needed

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable media	Foam, Sand, Carbon dioxide (CO2) and Water mist
Unsuitable media	Water spray jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	The pressure in sealed containers can increase under the influence of heat. Cool closed containers exposed to fire with water spray.

5.3 Advice for fire-fighters

Special protective equipment firefighters	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Further information	In the event of fire and/or explosion do not breathe fumes. Use extinguishing measures that are appropriate to local circumstances & the surrounding environment. Immediately evacuate personnel to safe areas. Prevent fire extinguishing water from contaminating surface water or the ground water system. Fire residues & contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Refer to protective measures listed in sections 7 and 8. Evacuate personnel to safe areas. Use personal protective equipment. Ensure adequate ventilation. Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.
6.2 Environmental precautions	Do not allow uncontrolled discharge of product into the environment. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Pick up and transfer to properly labelled containers.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	Provide sufficient air exchange and/or exhaust in work rooms. Avoid inhalation, ingestion and contact with skin and eyes. Wear personal protective equipment. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Advice on protection against fire & explosion	Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures	Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage & containers	Keep containers tightly closed in a dry, cool and well ventilated place. Keep in properly labelled containers.
Advice on common storage	Keep away from oxidising agents, acid or alkaline materials & amines. Keep product & empty container away from heat & sources of ignition. Keep away from food & drink.
Other data	Stable at normal ambient temperature and pressure.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

ingredient name	End Use	Exposure Routes	Effects	Value
bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700)	Workers	Skin contact	Acute systemic effects, Long-term systemic effects	8,33 mg/kg
	Workers	Inhalation	Acute systemic effects, Long-term local effects	12,25 mg/m3
	Consumers	Skin contact	Acute systemic effects, Long-term systemic effects	3,571 mg/kg
	Consumers	Ingestion	Acute systemic effects, Long-term systemic effects	0,75 mg/kg
1,6-bis(2,3-epoxypropoxy)hexane	Workers	Skin contact	Long-term systemic effects	2.8 mg/kg
	Workers	Inhalation	Long-term systemic effects	4.9 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

ingredient name	Compartment Detail	Value
bisphenol-A- (epichlorhydrin) and epoxy resin (number average molecular weight <= 700)	Fresh water	0,006 mg/l
	Marine water	0,0006 mg/l
	Intermittent releases	0,018 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0,996 mg/kg
	Marine sediment	0,0996 mg/kg
	Soil	0,196 mg/kg
1,6-bis(2,3-epoxypropoxy)hexane	Sewage treatment plant	1 mg/l
	Fresh water	0,0115 mg/l
	Fresh water sediment	0.283 mg/kg
	Marine water	0,00115 mg/l
	Marine sediment	0.0283 mg/kg
	Soil	0.223 mg/kg

8.2 Exposure controls

Engineering measures Effective exhaust ventilation system effective ventilation in all processing areas

Personal protective equipment

Eye protection	Do not wear contact lenses. Safety glasses with side-shields conforming to EN166. Ensure that eyewash stations and safety showers are close to the workstation location.
Hand protection Material	Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.
Skin and body protection	Protective suit
Respiratory protection	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. In the case of vapour formation use a respirator with an approved filter. Respirator with a vapour filter (EN 141) Apply technical measures to comply with the occupational exposure limits. This should be achieved by a good general extraction and –if practically feasible- by the use of a local exhaust ventilation.
Protective measures	Avoid contact with skin. Wear suitable protective equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Colour	light yellow
Odour	slight
Boiling point	> 200 °C
Flash point	140 °C
Density	1,15 g/cm3 (25 °C)
Viscosity, dynamic	500 - 600 mPa.s (25 °C)

10. STABILITY AND REACTIVITY

10.1 Reactivity	Stable under recommended storage conditions.
10.2 Chemical stability	No decomposition if stored and applied as directed.
10.3 Possibility of hazardous reactions	Reacts with the following substances: Bases, Strong oxidizing agents and amines.
10.4 Conditions to avoid	No decomposition if used as directed.
10.5 Incompatible materials	Incompatible with oxidizing agents.
10.6 Hazardous decomposition products	This product may release the following: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

11. TOXICOLOGICAL INFORMATION

Acute toxicity

ingredient name	Species	Exposure	Method	Result	GLP
Acute oral toxicity					
bisphenol-A-(epichlorhydrin) epoxy resin	Rat	LD50	OECD Test Guideline 420	> 2.000 mg/kg	yes
Acute dermal toxicity					
bisphenol-A-(epichlorhydrin) epoxy resin	Rat	LD50	OECD Test Guideline 402	> 2.000 mg/kg	yes

ingredient name	Species	Exposure	Method	Result	GLP
Skin corrosion/irritation					
bisphenol-A-(epichlorhydrin) epoxy resin	Rabbit	4 h	OECD Test Guideline 404	Skin irritation	yes
Respiratory or skin sensitisation					
bisphenol-A-(epichlorhydrin) epoxy resin	Mouse	LLNA	OECD Test Guideline 429	May cause sensitisation by skin contact	yes

12. ECOLOGICAL INFORMATION

12.1 Toxicity

bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700)

Toxicity test	Result	Exposure	Test Type	Method	GLP
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia (water flea)): 1,7 mg/l	48 h	static test	OECD Test Guideline 202	yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	NOEC: 0,3 mg/l	21 d	semi-static test	OECD Test Guideline 211	yes

12.2 Persistence and degradability

bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700)

Result	Method	GLP
Not readily biodegradable	OECD Test Guideline 301F	yes

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	In accordance with local and national regulations. Container hazardous when empty. Do not dispose of with domestic refuse. Do not mix waste streams during collection.
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

	ADR/RID	IMDG	IATA
14.1 UN number	UN 3082	UN 3082	UN 3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Epoxy resin)
14.3 Transport class(es)	9	9	9
14.4 Packing group	III	III	III
Labels	9	9	9
	Class. Code: M6	EmS Code: F-A, S-F	Packing Instr (cargo): 964
Hazard ID No	90 Tunnel Code: E		Packing Instr (pass): 964
14.5 Environmental hazards	Environmentally hazardous	Marine pollutant	

14.6 Special precautions for user: Not applicable

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 specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles		Not applicable	
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).		This product does not contain substances of very high concern	
REACH - List of substances subject to authorisation (Annex XIV)		Not applicable	
Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major accident hazards involving dangerous substances		Quantity 1	Quantity 2
9b	Dangerous for the environment	200 t	500 t
15.2 Chemical Safety Assessment	Not applicable		

16. OTHER INFORMATION

Full text of abbreviated Risk phrases	R36	Irritating to eyes.
	R36/38	Irritating to eyes and skin.
	R38	Irritating to skin.
	R43	May cause sensitisation by skin contact.
	R51	Toxic to aquatic organisms.
	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	R53	May cause long-term adverse effects in the aquatic environment.
Full text of abbreviated 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.

Full text of other abbreviations Aquatic Chronic = Chronic aquatic toxicity; Eye Irrit. = Eye irritation; Skin Irrit. = Skin irritation; Skin Sens. = Skin sensitisation

Further information The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.

IMPORTANT: THIS DOCUMENT CONTAINS FOR BOTH THE FAST AND SLOW VERSIONS OF THE AT30 HARDENER. FOR THE SLOW HARDENERSCROLL THROUGH THE DOCUMENT TO PAGE (8) ONWARDS.

SAFETY DATA SHEET
AT30 EPOXY HARDENER – FAST

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product name	AT30 Epoxy Hardener - Fast
Company	Easy Composites Ltd Unit 39 Park Hall Business Village Longton, Stoke-on-Trent ST3 5XA United Kingdom
Email	sales@easycomposites.co.uk
Telephone	+44 (0)1782 454499
Intended Use	Fast Hardener for laminating resin for GRP/CFRP composites.

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification - EC 1272/2008	Acute toxicity, Category 4	H302: Harmful if swallowed.
	Skin corrosion, Category 1B	H314: Causes severe skin burns and eye damage.
	Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
	Reproductive toxicity, Category 2	H361f: Suspected of damaging fertility.
	STOT - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
	Chronic aquatic toxicity, Category 2	H411: Toxic to aquatic life with long lasting effects.
Classification - 1999/45/EEC	Corrosive	R34: Causes burns.
	Harmful	R21/22: Harmful in contact with skin and if swallowed.
	Toxic to Reproduction Category 3	R62: Possible risk of impaired fertility.
	Sensitising	R43: May cause sensitisation by skin contact.
	Irritant	R37: Irritating to respiratory system.

2.2. Label elements

Hazard pictograms

Signal word Danger

Hazard statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:

P201 Obtain special instructions before use.
P280 Wear protective gloves/ protective clothing/eye protection/ face protection.
P281 Use personal protective equipment as required.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ 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 or doctor/ physician.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Product/ingredient name	CAS-No., EC-No., Registration No.	Conc. %	Classification 67/548/EEC	Classification 1272/2008 [CLP]
1,3-Cyclohexanedimethanamine	2579-20-6 219-941-5	30 - 50	C; R34 Xn; R22	Acute Tox. 4; H302 Skin Corr. 1B; H314
3,3-ethylenedioxybis (propylamine)	2997-01-5 221-067-4	25 – 30	Xn; R21 Xi; R43 C; R34	Acute Tox. 4; H312 Skin Corr. 1B; H314 Skin Sens. 1; H317
4,4'- isopropylidenediphenol	80-05-7 201-245-8 01-2119529244-43	20 - 25	Repr.Cat.3; R62 Xi; R37-R41 R43 R52	Repr. 2; H361f STOT SE 3; H335 Eye Dam. 1; H318 Skin Sens. 1; H317 Aqua Chron 2; H411
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)- .omega.-(2-aminomethylethoxy)	9046-10-0	12.5 - 20	C; R34 Xi; R41 R52/53	Skin Corr. 1C;H314 Eye Dam. 1; H318 Aqua Chron 2; H411

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice: Show this safety data sheet to the doctor in attendance. Keep warm and in a quiet place. Take off all contaminated clothing immediately.

If inhaled: Move to fresh air. Keep patient warm and at rest. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician. If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact: Wash off immediately with soap and plenty of water. Do NOT use solvents or thinners. If on clothes, remove clothes. If skin irritation persists, call a physician.

In case of eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist. If easy to do, remove contact lens, if worn.

If swallowed: Do NOT induce vomiting. If a person vomits when lying on his back, place him in the recovery position. Call a physician immediately. Give small amounts of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: Corrosive effects, Burns

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: No information available.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable media	Carbon dioxide (CO2), Foam, Dry powder, Water mist
Unsuitable media	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	The pressure in sealed containers can increase under the influence of heat. Cool closed containers exposed to fire with water spray. Hazardous decomposition products formed under fire conditions.

5.3 Advice for fire-fighters

Special protective equipment firefighters	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Further information	In the event of fire and/or explosion do not breathe fumes. Use extinguishing measures that are appropriate to local circumstances & the surrounding environment. Immediately evacuate personnel to safe areas. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Refer to protective measures listed in sections 7 and 8. Evacuate personnel to safe areas. Use personal protective equipment. Ensure adequate ventilation. Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.
6.2 Environmental precautions	Do not allow uncontrolled discharge of product into the environment. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Pick up and transfer to properly labelled containers.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	Provide sufficient air exchange and/or exhaust in work rooms. Avoid inhalation, ingestion and contact with skin and eyes. Wear personal protective equipment. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Advice on protection against fire & explosion	Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures	Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage & containers	Keep containers tightly closed in a dry, cool and well ventilated place. Keep in properly labelled containers. To maintain product quality, do not store in heat or direct sunlight.
Further information on storage conditions	Protect from moisture
Advice on common storage	Keep away from isocyanates. Do not store near acids. Keep away from oxidizing agents.
Other data	Stable at normal ambient temperature and pressure.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters Occupational Exposure Limits

Components	CAS-No.	Value type	Control parameters	Basis
4,4'-isopropylidenediphenol	80-05-7	TWA (inhalable dust)	10 mg/m3	GB EH40
Further information	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			
		TWA (Inhalable dust)	10 mg/m3	2009/161/EU
Further information	Indicative			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

ingredient name	End Use	Exposure Routes	Effects	Value
4,4'-isopropylidenediphenol	Consumers	Inhalation	Acute local effects	5 mg/m3
	Consumers	Inhalation	Acute systemic effects	5 mg/m3
	Consumers	Inhalation	Long-term local effects	5 mg/m3
	Consumers	Ingestion	Long-term systemic effects	0,05 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0,25 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0,7 mg/kg
	Workers	Inhalation	Acute local effects	10 mg/m3
	Workers	Inhalation	Acute systemic effects	10 mg/m3
	Workers	Inhalation	Long-term local effects	10 mg/m3
	Workers	Inhalation	Long-term systemic effects	10 mg/m3
	Workers	Skin contact	Long-term systemic effects	1,4 mg/kg
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)				
	Workers	Skin contact	Long-term systemic effects	2,5 mg/kg
	Workers	Skin contact	Long-term local effects	0,623 g/cm2
	Consumers	Skin contact	Long-term systemic effects	1,25 mg/kg
	Consumers	Skin contact	Long-term local effects	0,311mg/cm2
	Consumers	Ingestion	Long-term systemic effects	0,04 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

ingredient name	Compartment Detail	Value
4,4'-isopropylidenediphenol	Fresh water	0,018 mg/l
	Intermittent releases	0,01 mg/l
	Marine water	0,016 mg/l
	Fresh water sediment	2,2 mg/kg
	Marine sediment	0,44 mg/kg
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2 aminomethylethoxy)		
	Fresh water	0,015 mg/l
	Marine water	0,0143 mg/l
	Fresh water sediment	0,132 mg/kg
	Marine sediment	0,125 mg/kg
	Soil	0,0176 mg/kg
	Intermittent releases	0,15 mg/l
	Sewage treatment plant	7,5 mg/l

8.2 Exposure controls

Engineering measures	Effective exhaust ventilation system, effective ventilation in all processing areas
Eye protection	Safety glasses with side-shields conforming to EN166. Do not wear contact lenses. Ensure that eyewash stations and safety showers are close to the workstation location.
Hand protection Material	Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.
Skin and body protection	Protective suit
Respiratory protection	Use respirator when performing operations involving potential exposure to vapour of the product. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self contained breathing apparatus must be used. Respirator with a vapour filter (EN 141)
Protective measures	Avoid contact with skin. Wear suitable protective equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Colour	light yellow
Odour	ammoniacal
Boiling point	> 150 °C
Flash point	100 °C
Density	1,04 g/cm3 (25 °C)
Viscosity, dynamic	30 - 80 mPa.s (25 °C)

10. STABILITY AND REACTIVITY

10.1 Reactivity	Stable under recommended storage conditions.
10.2 Chemical stability	No decomposition if stored and applied as directed.
10.3 Possibility of hazardous reactions	Reacts with the following substances: Acids, Strong oxidizing agents.
10.4 Conditions avoid	No decomposition if used as directed.
10.5 Incomp. materials	Strong acids, Strong oxidizing agents
10.6 Haz. Decomp.	This product may release the following: Nitrogen oxides (NOx), Carbon monoxide, Carbon dioxide (CO2)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

ingredient name	**Species**	**Exposure**	**Method**	**Result**	**GLP**
Acute oral toxicity			Calculation method	1.250 mg/kg	
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)	Rat	LD50	OECD Test Guideline 401	2.885,3 mg/kg	yes
Acute dermal toxicity			Calculation method	> 2.000 mg/kg	
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)	Rabbit	LD50	OECD Test Guideline 402	2.979,7 mg/kg	yes
Skin corrosion/irritation					
4,4'-isopropylidenediphenol	Rabbit		OECD Test Guideline 404	No skin irritation	yes
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)	Rabbit		OECD Test Guideline 404	Corrosive	
Serious eye damage/eye irritation					
4,4'-isopropylidenediphenol	Rabbit		OECD Test Guideline 405	Risk of serious damage to eyes	yes
ingredient name	**Species**	**Exposure**	**Method**	**Result**	**GLP**
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)			OECD Test Guideline 405	Risk of serious damage to eyes	

12. ECOLOGICAL INFORMATION

12.1 Toxicity

4,4'-isopropylidenediphenol

Toxicity test	**Result**	**Exposure**	**Test Type**	**Method**	**GLP**
Toxicity to fish	LC50 9,4 mg/l	96 h	flow-through test	OECD Test Guideline 203	yes

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)

Toxicity to fish	LC50 > 15 mg/l	96 h	semi-static test	OECD Test Guideline 203	yes
Toxicity to daphnia and aquatic invertebrates	EC50 80 mg/l	48 h	static test	OECD Test Guideline 202	yes
Toxicity to algae	NOEC 0,32 mg/l	72 h	static test	OECD Test Guideline 201	yes

12.2 Persistence and degradability

4,4'-isopropylidenediphenol

Test Type	**Result**	**Method**	**GLP**
aerobic	Readily biodegradable	OECD Test Guideline 301F	yes
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)			
aerobic	Not readily biodegradable	OECD Test Guideline 301B	Yes

12.3 Bioaccumulative potential

4,4'-isopropylidenediphenol

Partition coefficient: noctanol/water	**pH**	**Method**	**GLP**
log Pow: 3,4 (21,5 °C)	6,4	OECD Test Guideline 107	yes
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)			
log Pow: 1,34 (25 °C)		OECD Test Guideline 117	Yes

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	In accordance with local and national regulations. Container hazardous when empty. Do not dispose of with domestic refuse. Do not mix waste streams during collection.
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

	ADR/RID	**IMDG**	**IATA**
14.1 UN number	UN 2735	UN 2735	UN 2735
14.2 UN proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. (Cyclohexanedimethanamine)	AMINES, LIQUID, CORROSIVE, N.O.S. (Cyclohexanedimethanamine)	AMINES, LIQUID, CORROSIVE, N.O.S. (Cyclohexanedimethanamine)
14.3 Transport class(es)	8	8	8
14.4 Packing group	II	II	II
Labels	8	8	8
	Class. Code: C7	EmS Code: F-A, S-B	Packing Instr (cargo): 855
Hazard ID No	80		Packing Instr (pass): 851
14.5 Environmental hazards	Environmentally hazardous	Marine pollutant	

14.6 Special precautions for user: Not applicable

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 specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	This product does not contain substances of very high concern
REACH - List of substances subject to authorisation (Annex XIV)	Not applicable

Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major accident hazards involving dangerous substances

Not applicable

15.2 Chemical Safety Assessment Not applicable

16. OTHER INFORMATION

Full text of abbreviated Risk phrases

R21 : Harmful in contact with skin.
R22 : Harmful if swallowed.
R34 : Causes burns.
R37 : Irritating to respiratory system.
R41 : Risk of serious damage to eyes.
R43 : May cause sensitisation by skin contact.
R52 : Harmful to aquatic organisms.
R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62 : Possible risk of impaired fertility.

Full text of abbreviated Hazard statements

H302 : Harmful if swallowed.
H312 : Harmful in contact with skin.
H314 : Causes severe skin burns and eye damage.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H335 : May cause respiratory irritation.
H361f : Suspected of damaging fertility.
H411 : Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Chronic : Chronic aquatic toxicity
Eye Dam. : Serious eye damage
Repr. : Reproductive toxicity
Skin Corr. : Skin corrosion
Skin Sens. : Skin sensitisation
STOT SE : Specific target organ toxicity - single exposure

Further information The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.

SAFETY DATA SHEET
AT30 EPOXY HARDENER – SLOW

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product name	AT30 Epoxy Hardener - Slow
Company	Easy Composites Ltd Unit 39 Park Hall Business Village Longton, Stoke-on-Trent ST3 5XA United Kingdom
Email	sales@easycomposites.co.uk
Telephone	+44 (0)1782 454499
Intended Use	Slow Hardener for laminating resin for GRP/CFRP composites.

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification - EC 1272/2008	Acute toxicity, Category 4	H302: Harmful if swallowed.
	Skin corrosion, Category 1B	H314: Causes severe skin burns and eye damage.
	Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
	Chronic aquatic toxicity, Category 2	H411: Toxic to aquatic life with long lasting effects.
Classification - 1999/45/EEC	Corrosive	R34: Causes burns.
	Harmful	R21/22: Harmful in contact with skin and if swallowed.
	Sensitising	R43: May cause sensitisation by skin contact.
	Dangerous for the environment	R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in aquatic environment.

2.2. Label elements

Hazard pictograms

Signal word Danger

Hazard statements

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:

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.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ 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 or doctor/ physician.

2.3 Other hazards This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Product/ingredient name	CAS-No., EC-No., Registration No.	Conc. %	Classification 67/548/EEC	Classification 1272/2008 [CLP]
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)	9046-10-0	30 – 50	C; R34 Xi; R41 R52/53	Skin Corr. 1C;H314 Eye Dam. 1; H318 Aqua Chron 2; H411
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2 220-666-8 01-2119514687-32	30 – 50	C; R34 Xn; R21/22 R43 R52-R53	Acute Tox. 4; H312 Acute Tox. 4; H302 Skin Corr. 1B;H314 Skin Sens. 1; H317 Aqua Chron 3;H412
trimethylhexane-1,6-diamin	25620-58-0 247-134-B	7 – 10	Xn; R22 C; R34 Xi; R43 N; R52/53	Acute Tox. 4; H302 Skin Corr. 1B;H314 Skin Sens. 1; H317 Aqua Chron 3;H412
benzyl alcohol	100-51-6 202-859-9 01-2119492630-38	1 – 3	Xn; R20/22	Acute Tox. 4; H332 Acute Tox. 4; H302

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice: Show this safety data sheet to the doctor in attendance. Keep warm and in a quiet place. Take off all contaminated clothing immediately.

If inhaled: Move to fresh air. Keep patient warm and at rest. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician. If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact: Wash off immediately with soap and plenty of water. Do NOT use solvents or thinners. If on clothes, remove clothes. If skin irritation persists, call a physician.

In case of eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist. If easy to do, remove contact lens, if worn.

If swallowed: Do NOT induce vomiting. If a person vomits when lying on his back, place him in the recovery position. Call a physician immediately. Give small amounts of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: Corrosive effects, Burns

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: No information available.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable media: Carbon dioxide (CO2), Foam, Dry powder, Water mist

Unsuitable media: None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: The pressure in sealed containers can increase under the influence of heat. Cool closed containers exposed to fire with water spray. Hazardous decomposition products formed under fire conditions.

5.3 Advice for fire-fighters

Special protective equipment firefighters	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Further information	In the event of fire and/or explosion do not breathe fumes. Use extinguishing measures that are appropriate to local circumstances & the surrounding environment. Immediately evacuate personnel to safe areas. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Refer to protective measures listed in sections 7 and 8. Evacuate personnel to safe areas. Use personal protective equipment. Ensure adequate ventilation. Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.
6.2 Environmental precautions	Do not allow uncontrolled discharge of product into the environment. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Pick up and transfer to properly labelled containers.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	Provide sufficient air exchange and/or exhaust in work rooms. Avoid inhalation, ingestion and contact with skin and eyes. Wear personal protective equipment. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Advice on protection against fire & explosion	Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures	Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage & containers	Keep containers tightly closed in a dry, cool and well ventilated place. Keep in properly labelled containers. To maintain product quality, do not store in heat or direct sunlight.
Further information on storage conditions	Protect from moisture
Advice on common storage	Keep away from isocyanates. Do not store near acids. Keep away from oxidizing agents.
Other data	Stable at normal ambient temperature and pressure.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

ingredient name	End Use	Exposure Routes	Effects	Value
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)				
	Workers	Skin contact	Long-term systemic effects	2,5 mg/kg
	Workers	Skin contact	Long-term local effects	0,623 g/cm2

	Consumers	Skin contact	Long-term systemic effects	1,25 mg/kg
	Consumers	Skin contact	Long-term local effects	0,311mg/cm2
	Consumers	Ingestion	Long-term systemic effects	0,04 mg/kg
benzyl alcohol	Workers	Inhalation	Short-term exposure, Systemic effect	450 mg/m3
	Workers	Inhalation	Long-term exposure, Systemic effect	90 mg/m3
	Workers	Skin contact	Short-term exposure, Systemic effect	47 mg/kg
	Workers	Skin contact	Long-term exposure, Systemic effect	9,5 mg/kg
	Consumers	Ingestion	Short-term exposure, Systemic effects	25 mg/kg
	Consumers	Ingestion	Long-term exposure, Systemic effects	5 mg/kg
	Consumers	Inhalation	Short-term exposure, Systemic effects	40,55 mg/m3
	Consumers	Inhalation	Long-term exposure, Systemic effects	8,11 mg/m3
	Consumers	Skin contact	Short-term exposure, Systemic effects	28,5 mg/kg
	Consumers	Skin contact	Long-term exposure, Systemic effects	5,7 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

ingredient name	**Compartment Detail**	**Value**
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2 aminomethylethoxy)		
	Fresh water	0,015 mg/l
	Marine water	0,0143 mg/l
	Fresh water sediment	0,132 mg/kg
	Marine sediment	0,125 mg/kg
	Soil	0,0176 mg/kg
	Intermittent releases	0,15 mg/l
	Sewage treatment plant	7,5 mg/l
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Fresh water	0,06 mg/l
	Marine water	0,006 mg/l
	Intermittent releases	0,23 mg/l
	Fresh water sediment	5,784 mg/kg
	Marine sediment	0,578 mg/kg
	Sewage treatment plant	3,18 mg/l
	Soil	1,121 mg/kg
benzyl alcohol	Fresh water	1 mg/l
	Marine water	0,1 mg/l
	Fresh water sediment	5,27 mg/kg
	Marine sediment	0,527 mg/kg
	Soil	0,456 mg/kg
	Sewage treatment plant	39 mg/l
	Intermittent releases	2,3 mg/l

8.2 Exposure controls

Engineering measures	Effective exhaust ventilation system, effective ventilation in all processing areas
Eye protection	Safety glasses with side-shields conforming to EN166. Do not wear contact lenses. Ensure that eyewash stations and safety showers are close to the workstation location.
Hand protection Material	Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.
Skin and body protection	Protective suit
Respiratory protection	Use respirator when performing operations involving potential exposure to vapour of the product. The filter class for the respirator must be suitable for the maximum

	expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self contained breathing apparatus must be used. Respirator with a vapour filter (EN 141)
Protective measures	Avoid contact with skin. Wear suitable protective equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Colour	light yellow
Odour	ammoniacal
Boiling point	> 150 °C
Flash point	150 °C
Density	0.93 g/cm3 (25 °C)
Viscosity, dynamic	5 - 20 mPa.s (25 °C)

10. STABILITY AND REACTIVITY

10.1 Reactivity	Stable under recommended storage conditions.
10.2 Chemical stability	No decomposition if stored and applied as directed.
10.3 Possibility of hazardous reactions	Reacts with the following substances: Acids, Strong oxidizing agents.
10.4 Conditions avoid	No decomposition if used as directed.
10.5 Incomp. materials	Strong acids, Strong oxidizing agents
10.6 Haz. Decomp.	This product may release the following: Nitrogen oxides (NOx), Carbon monoxide, Carbon dioxide (CO2)

11. TOXICOLOGICAL INFORMATION

Acute toxicity **ingredient name**	**Species**	**Exposure**	**Method**	**Result**	**GLP**
Acute oral toxicity			Calculation method	909,09 mg/kg	
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)	Rat	LD50	OECD Test Guideline 401	2.885,3 mg/kg	yes
3-aminomethyl-3,5,5-trimethylcyclohexylamine			Converted acute toxicity point estimate	500 mg/kg	
Acute dermal toxicity			Calculation method	> 2.000 mg/kg	
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)	Rabbit	LD50	OECD Test Guideline 402	2.979,7 mg/kg	yes
3-aminomethyl-3,5,5-trimethylcyclohexylamine			Converted acute toxicity point estimate	1.100 mg/kg	
Acute inhalation toxicity					
benzyl alcohol	Rat,	LC50 4h	OECD Test Guideline 403	> 4.178 mg/l	yes
Skin corrosion/irritation					
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)	Rabbit		OECD Test Guideline 404	Corrosive	
benzyl alcohol	Rabbit		OECD Test Guideline 404	No skin irritation	yes
Serious eye damage/eye irritation					
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)			OECD Test Guideline 405	Risk of serious damage to eyes	
benzyl alcohol	Rabbit		OECD Test Guideline 405	Eye irritation	yes

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity test	Result	Exposure	Test Type	Method	GLP
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)					
Toxicity to fish	LC50 > 15 mg/l	96 h	semi-static test	OECD Test Guideline 203	yes
Toxicity to daphnia and aquatic invertebrates	EC50 80 mg/l	48 h	static test	OECD Test Guideline 202	yes
Toxicity to algae	NOEC 0,32 mg/l	72 h	static test	OECD Test Guideline 201	yes
3-aminomethyl-3,5,5-trimethylcyclohexylamine					
Toxicity to fish	LC50 110 mg/l	96 h	semi-static test	67/548/EEC, Annex V, C.1.	yes
Toxicity to daphnia & other aquatic invertebrate	EC50 23 mg/l	48 h	static test	OECD Test Guideline 202	yes
Toxicity to algae	ErC50 50 mg/l	72 h	static test	67/548/EEC, Annex V, C.3.	yes
Toxicity to daphnia & other aquatic invertebrate (Chronic toxicity)	NOEC: 3 mg/l	21 d	semi-static test		yes
benzyl alcohol					
Toxicity to daphnia & other aquatic invertebrate	EC50 230 mg/l	48 h		OECD Test Guideline 202	yes
Toxicity to algae	ErC50 770mg/l	72 h	static test	OECD Test Guideline 201	yes

12.2 Persistence and degradability

Test Type	Result	Method	GLP
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)			
aerobic	Not readily biodegradable	OECD Test Guideline 301B	Yes
3-aminomethyl-3,5,5-trimethylcyclohexylamine			
aerobic	Not readily biodegradable	67/548/EEC Annex V, C.4.A.	yes
trimethylhexane-1,6-diamine			
aerobic	Not readily biodegradable	67/548/EEC Annex V, C.4.A.	yes

12.3 Bioaccumulative potential

Partition coefficient: noctanol/water	pH	Method	GLP
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)			
log Pow: 1,34 (25 °C)		OECD Test Guideline 117	Yes
3-aminomethyl-3,5,5-trimethylcyclohexylamine			
log Pow: 0,99		OECD Test Guideline 107	yes

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	In accordance with local and national regulations. Container hazardous when empty. Do not dispose of with domestic refuse. Do not mix waste streams during collection.
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

	ADR/RID	IMDG	IATA
14.1 UN number	UN 2735	UN 2735	UN 2735
14.2 UN proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. (PolyoxypropyleneDiamine)	AMINES, LIQUID, CORROSIVE, N.O.S. (PolyoxypropyleneDiamine)	AMINES, LIQUID, CORROSIVE, N.O.S. (Polyoxypropylene Diamine)
14.3 Transport class(es)	8	8	8
14.4 Packing group	III	III	III
Labels	8	8	8
	Class. Code: C7	EmS Code: F-A, S-B	Packing Instr (cargo): 856
Hazard ID No	80		Packing Instr (pass): 852
14.5 Environ. hazards	Environmentally hazardous	Marine pollutant	

15. REGULATORY INFORMATION

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). This product does not contain substances of very high concern

15.2 Chemical Safety Assessment Not applicable

16. OTHER INFORMATION

Full text of abbreviated Risk phrases

R20/22 : Harmful by inhalation and if swallowed.
R21/22 : Harmful in contact with skin and if swallowed.
R22 : Harmful if swallowed.
R34 : Causes burns.
R41 : Risk of serious damage to eyes.
R43 : May cause sensitisation by skin contact.
R52 : Harmful to aquatic organisms.
R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53 : May cause long-term adverse effects in the aquatic environment.

Full text of abbreviated Hazard statements

H302 : Harmful if swallowed.
H312 : Harmful in contact with skin.
H314 : Causes severe skin burns and eye damage.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H332 : Harmful if inhaled.
H411 : Toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Chronic : Chronic aquatic toxicity
Eye Dam. : Serious eye damage
Skin Corr. : Skin corrosion
Skin Sens. : Skin sensitisation

Further information The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.