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 Easy Composites Ltd Company

Unit 39

Park Hall Business Village Longton, Stoke-on-Trent

ST3 5XA **United Kingdom**

Email sales@easycomposites.co.uk

+44 (0)1782 454499 Telephone

Intended Use Fast Hardener for laminating resin for GRP/CFRP composites.

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification - EC Acute toxicity, Category 4 H302: Harmful if swallowed.

1272/2008 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 aguatic toxicity, Category 2 H411: Toxic to aquatic life with long lasting effects.

Classification -R34: Causes burns. Corrosive 1999/45/EEC

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 **Hazard statements**

H302 Harmful if swallowed.

Causes severe skin burns and eye damage. H314 H317 May cause an allergic skin reaction.

May cause respiratory irritation. H335 H361f Suspected of damaging fertility.

Toxic to aquatic life with long lasting effects. H411

Easy Composites SDS – AT30 Epoxy Hardener- Revision 3 – Revision Date 22 Oct 2014 Page 2 of 14

Precautionary Prevention:

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

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.

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 Oc	cunational Exposure	Limits				
Components	CAS-No.	Value type	Control parameters	Basis		
4,4'-isopropylidenediphenol	80-05-7	TWA (inhalable du		GB EH40		
Further information			sure limit is listed, a figure thro			
Turther information	long-term exposure should be used					
	iong-term expe	TWA (Inhalable du		2009/161/EU		
Further information	Indicative	TWA (IIIIIalabic da	3t) 10 mg/m3	2007/101/20		
Derived No Effect Level (DNI		ulation (FC) No. 1907	7/2006:			
ingredient name	End Use	Exposure Routes	Effects	Value		
4,4'-isopropylidenediphenol	Consumers	Inhalation	Acute local effects	5 mg/m3		
4,4 Isopropyllacitedipherior	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-ethaned				.,		
	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 Concent				. 5 5		
	• •					
ingredient name		Compartment De				
ingredient name 4,4'-isopropylidenediphenol		Compartment De Fresh water				
_		-	etail Value 0,018 mg/l			
_		Fresh water	etail Value 0,018 mg/l			
_		Fresh water Intermittent relea	etail Value 0,018 mg/l ases 0,01 mg/l 0,016 mg/l			
_		Fresh water Intermittent relea Marine water	etail Value 0,018 mg/l ases 0,01 mg/l 0,016 mg/l ment 2,2 mg/kg			
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4,4'-isopropylidenediphenol	liyl)], .alpha(2-amin	Fresh water Intermittent relea Marine water Fresh water sedir Marine sediment omethylethyl)omeo Fresh water	etail Value 0,018 mg/l 0,018 mg/l 0,016 mg/l 0,016 mg/l 2,2 mg/kg 0,44 mg/kg ga(2 aminomethylethoxy) 0,015 mg/l 0,0143 mg/kg ment 0,132 mg/kg	g		
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4,4'-isopropylidenediphenol Poly[oxy(methyl-1,2-ethaned 8.2 Exposure controls Engineering measures Eye protection Hand protection Material Skin and body protection	Effective exhaust versafety glasses with Ensure that eyewas Chemical resistant of to EN 374. Protective suit Use respirator when the product. The filt expected contamination when handling the apparatus must be	Fresh water Intermittent relea Marine water Fresh water sediment omethylethyl)omeo Fresh water Marine water Marine water Fresh water sediment Soil Intermittent relea Sewage treatment entilation system, eff side-shields conform th stations and safety gloves made of butyl on performing operation ter class for the resp ant concentration (g. product. If this conceused. Respirator witl	etail O,018 mg/l O,016 mg/l O,016 mg/l O,016 mg/l O,044 mg/kg ga(2 aminomethylethoxy) O,015 mg/l O,0143 mg/kg O,125 mg/kg O,125 mg/kg O,0176 mg/l T,5 mg/l fective ventilation in all process ning to EN166. Do not wear co y showers are close to the worl rubber or nitrile rubber categoricator must be suitable for the as/vapour/aerosol/particulates	essing areas ntact lenses. ekstation location. fory III according ure to vapour of a maximum es) that may arise		

9. PHYSICAL AND CHEMICAL PROPERTIES

AppearanceliquidColourlight yellowOdourammoniacalBoiling point> 150 °CFlash point100 °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 Reacts with the following substances: Acids, Strong oxidizing agents.

hazardous reactions

10.4 Conditions avoid10.5 Incomp. materialsNo decomposition if used as directed.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

Acu	te toxicity					
	redient name	Species	Exposure	Method	Result	GLP
•	te oral toxicity	•	•	Calculation method	1.250 mg/kg	
Poly	y[oxy(methyl-1,2-ethanediyl)], .alpha	Rat	LD50	OECD Test Guideline 401	2.885,3 mg/kg	yes
(2-a	minomethylethyl)omega(2-					
ami	nomethylethoxy)					
Acu	te dermal toxicity			Calculation method	> 2.000 mg/kg	
Poly	y[oxy(methyl-1,2-ethanediyl)], .alpha	Rabbit	LD50	OECD Test Guideline 402	2.979,7 mg/kg	yes
•	ıminomethylethyl)omega(2-					
ami	nomethylethoxy)					
	n corrosion/irritation					
	-isopropylidenediphenol	Rabbit		OECD Test Guideline 404	No skin irritation	yes
•	y[oxy(methyl-1,2-ethanediyl)], .alpha	Rabbit		OECD Test Guideline 404	Corrosive	
•	ıminomethylethyl)omega(2-					
ami	nomethylethoxy)					
	ious eye damage/eye irritation					
4,4'	-isopropylidenediphenol	Rabbit		OECD Test Guideline 405	Risk of serious	yes
inar	radiant nama	Species.	Evnocuro	Method	damage to eyes Result	GLP
_	redient name	Species	Exposure	OECD Test Guideline 405	Risk of serious	GLP
,	y[oxy(methyl-1,2-ethanediyl)], .alpha			OECD Test Guideline 405		
•	minomethylethyl)omega(2-				damage to eyes	
aiiil	nomethylethoxy)					

12. ECOLOGICAL INFORMATION

12.1 Toxicity

4,4'-isopropylidenediphenol

Toxicity testResultExposureTest TypeMethodGLPToxicity to fishLC50 9,4 mg/l96 hflow-through testOECD Test Guideline 203yes

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

Toxicity to fish LC50 > 15 mg/I96 h semi-static test **OECD Test Guideline 203** yes Toxicity to daphnia and EC50 80 mg/l 48 h static test **OECD Test Guideline 202** yes aquatic invertebrates Toxicity to algae NOEC 0,32 mg/l **OECD Test Guideline 201** 72 h static test 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/waterpHMethodGLPlog Pow: 3,4 (21,5 °C)6,4OECD Test Guideline 107yes

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 Empty containers should be taken to an approved waste handling site for recycling or

Packaging disposal.

14. TRANSPORT INFORMATION

	ADR/RID	IMDG	IATA
14.1 UN number	UN 2735	UN 2735	UN 2735
14.2 UN proper	AMINES, LIQUID, CORROSIVE,	AMINES, LIQUID, CORROSIVE,	AMINES, LIQUID, CORROSIVE,
shipping name	N.O.S.	N.O.S.	N.O.S.
	(Cyclohexanedimethanamine)	(Cyclohexanedimethanamine)	(Cyclohexanedimethanamine)
14.3 Transport	8	8	8
class(es)			
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	Environmentally hazardous	Marine pollutant	
For the contract of			

Environmental

hazards

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 Not applicable

and use of certain dangerous substances, preparations and articles (Annex XVII)

REACH - Candidate List of Substances of Very High Concern for This product does not contain substances of

Authorisation (Article 59). 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

Not applicable

Assessment

16. OTHER INFORMATION

Full text of abbreviated R21: Harmful in contact with skin.

Risk phrases 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 <u>sales@easycomposites.co.uk</u>

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 Acute toxicity, Category 4 H302: Harmful if swallowed.

1272/2008 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 - Corrosive R34: Causes burns.

1999/45/EEC 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 Prevention:

statements 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. %	67/548/EEC	Classification 1272/2008 [CLP]
Poly[oxy(methyl-1,2-ethanediyl)],	9046-10-0	30 – 50	C; R34	Skin Corr. 1C;H314
.alpha(2-aminomethylethyl)-			Xi; R41	Eye Dam. 1; H318
.omega(2-aminomethylethoxy)			R52/53	Aqua Chron 2; H411
3-aminomethyl-3,5,5-	2855-13-2	30 – 50	C; R34	Acute Tox. 4; H312
trimethylcyclohexylamine	220-666-8		Xn; R21/22	Acute Tox. 4; H302
	01-2119514687-32		R43	Skin Corr. 1B;H314
			R52-R53	Skin Sens. 1; H317
				Aqua Chron 3;H412
trimethylhexane-1,6-diamin	25620-58-0	7 – 10	Xn; R22	Acute Tox. 4; H302
	247-134-B		C; R34	Skin Corr. 1B;H314
			Xi; R43	Skin Sens. 1; H317
			N; R52/53	Aqua Chron 3;H412
benzyl alcohol	100-51-6	1 – 3	Xn; R20/22	Acute Tox. 4; H332
	202-859-9			Acute Tox. 4; H302
	01-2119492630-38			

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. Do NOT induce vomiting. If a person vomits when Iving 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

If swallowed

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 The pressure in sealed containers can increase under the influence of heat. Cool closed

firefighting containers exposed to fire with water spray. Hazardous decomposition products formed

under fire conditions.

Easy Composites SDS – AT30 Epoxy Hardener- Revision 3 – Revision Date 22 Oct 2014 Page 10 of 14

5.3 Advice for fire-fighters

Special protective equipment firefighters

6.2 Environmental

In the event of fire, wear self-contained breathing apparatus. Use personal protective

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

Refer to protective measures listed in sections 7 and 8. Evacuate personnel to safe Personal precautions

> 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. Do not allow uncontrolled discharge of product into the environment. Try to prevent the

precautions 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

Provide sufficient air exchange and/or exhaust in work rooms. Avoid inhalation, Advice on safe handling

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 Further information on

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.

storage conditions

Protect from moisture

Advice on common

Keep away from isocyanates. Do not store near acids. Keep away from oxidizing agents.

storage

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**

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

Value

Page 11 of 14					
	Consumers Consumers	Skin contact Skin contact	Long-term syste	effects	1,25 mg/kg 0,311mg/cm2
benzyl alcohol	Consumers Workers	Ingestion Inhalation	Short-term expo Systemic effect		0,04 mg/kg 450 mg/m3
	Workers	Inhalation	Long-term expo Systemic effect	sure,	90 mg/m3
	Workers	Skin contact	Short-term expo Systemic effect	osure,	47 mg/kg
	Workers	Skin contact	Long-term expo Systemic effect	sure,	9,5 mg/kg
	Consumers	Ingestion	Short-term expo		25 mg/kg
	Consumers	Ingestion	Long-term expo Systemic effects	sure,	5 mg/kg
	Consumers	Inhalation	Short-term expo		40,55 mg/m3
	Consumers	Inhalation	Long-term expo Systemic effects	sure,	8,11 mg/m3
	Consumers	Skin contact	Short-term expo	osure,	28,5 mg/kg
	Consumers	Skin contact	Long-term expo Systemic effects	sure,	5,7 mg/kg
Predicted No Effect Concentration ((PNEC) accordi	ing to Regulation (EC	,		
ingredient name		Compartment De	tail	Value	
Poly[oxy(methyl-1,2-ethanediyl)], .a	lpha(2-amino				
		Fresh water		0,015 mg/l	
		Marine water		0,0143 mg/l	
		Fresh water sedim		0,132 mg/kg	
		Marine sediment		0,125 mg/kg	
		Soil		0,0176 mg/kg	
		Intermittent relea		0,15 mg/l	
2 and in one other 1.2 F. F. twins other develop	la a con dia marka a	Sewage treatmen	•	7,5 mg/l	
3-aminomethyl-3,5,5-trimethylcyclo	nexylamine	Fresh water		0,06 mg/l	
		Marine water		0,006 mg/l	
		Intermittent relea		0,23 mg/l	
		Fresh water sedim Marine sediment		5,784 mg/kg 0,578 mg/kg	
		iviai irie seuiifiefit		U,576 mg/kg	

•	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
.2 Exposure controls		

Soil

Fresh water

8.2	Expo	sure	cont	rols
Eng	jineer	ing r	neas	ures

benzyl alcohol

Eye protection

Hand protection Material

Skin and body protection Respiratory protection Effective exhaust ventilation system, effective ventilation in all processing areas 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. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.

3,18 mg/l 1,121 mg/kg

1 mg/l

Sewage treatment plant

Protective suit

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

Easy Composites SDS – AT30 Epoxy Hardener- Revision 3 – Revision Date 22 Oct 2014 Page 12 of 14

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

AppearanceliquidColourlight yellowOdourammoniacalBoiling point> 150 °CFlash point150 °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 Reacts with the following substances: Acids, Strong oxidizing agents.

hazardous reactions

10.4 Conditions avoid10.5 Incomp. materialsNo decomposition if used as directed.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

Species	Exposure	Method	Result	GLP
		Calculation method	909,09 mg/kg	
Rat	LD50	OECD Test Guideline 401	2.885,3 mg/kg	yes
		Converted acute toxicity	500 mg/kg	
		•		
		Calculation method	> 2.000 mg/kg	
Rabbit	LD50	OECD Test Guideline 402	2.979,7 mg/kg	yes
		Converted acute toxicity	1.100 mg/kg	
		point estimate		
Rat,	LC50 4h	OECD Test Guideline 403	> 4.178 mg/l	yes
Rabbit		OECD Test Guideline 404	Corrosive	
Rabbit		OECD Test Guideline 404	No skin irritation	yes
		OECD Test Guideline 405		
			damage to eyes	
5				
Rabbit		OECD Test Guideline 405	Eye irritation	yes
	Rat	Rat LD50 Rabbit LD50 Rat, LC50 4h Rabbit Rabbit	Rat LD50 Calculation method OECD Test Guideline 401 Converted acute toxicity point estimate Calculation method OECD Test Guideline 402 Converted acute toxicity point estimate Converted acute toxicity point estimate Rat, LC50 4h OECD Test Guideline 403 Rabbit OECD Test Guideline 404 OECD Test Guideline 404 OECD Test Guideline 404	Rat LD50 Calculation method OECD Test Guideline 401 2.885,3 mg/kg Converted acute toxicity point estimate Calculation method OECD Test Guideline 402 2.000 mg/kg Rabbit LD50 Converted acute toxicity point estimate Converted acute toxicity 2.979,7 mg/kg Converted acute toxicity point estimate Rat, LC50 4h OECD Test Guideline 403 > 4.178 mg/l Rabbit OECD Test Guideline 404 Corrosive Rabbit OECD Test Guideline 404 No skin irritation OECD Test Guideline 405 Risk of serious damage to eyes

12. ECOLOGICAL INFORMATION

12.1 Toxicity						
Toxicity test	Result	Exposure	Test Type	Method		GLP
Poly[oxy(methyl-1,2-ethan		•				
Toxicity to fish	LC50 > 15 mg/l	96 h	semi-static test	OECD Test Guideline	203	yes
Toxicity to daphnia and	EC50 80 mg/l	48 h	static test	OECD Test Guideline	202	yes
aquatic invertebrates						
Toxicity to algae	NOEC 0,32 mg/l	72 h	static test	OECD Test Guideline	201	yes
3-aminomethyl-3,5,5-trime	, ,	ne				
Toxicity to fish	LC50 110 mg/l	96 h	semi-static test	67/548/EEC, Annex V	′, C.1.	yes
Toxicity to daphnia &	EC50 23 mg/l	48 h	static test	OECD Test Guideline	202	yes
other aquatic invertebrate						
Toxicity to algae	ErC50 50 mg/l	72 h	static test	67/548/EEC, Annex V	, C.3.	yes
Toxicity to daphnia &	NOEC: 3 mg/l	21 d	semi-static test			yes
other aquatic invertebrate						
(Chronic toxicity)						
benzyl alcohol						
Toxicity to daphnia &	EC50 230 mg/l	48 h		OECD Test Guideline	202	yes
other aquatic invertebrate						
Toxicity to algae	ErC50 770mg/l	72 h	static test	OECD Test Guideline	201	yes
12.2 Persistence and degra	dability					
Test Type	Result		Method		GLP	
Poly[oxy(methyl-1,2-ethan	ediyl)], .alpha(2-a	minomethyl	lethyl)omega(2-a	minomethylethoxy)		
aerobic	Not readily bid	odegradable	OECD Test (Guideline 301B	Yes	
3-aminomethyl-3,5,5-trime	thylcyclohexylamir	ne				
aerobic	Not readily bid	odegradable	67/548/EEC	Annex V, C.4.A.	yes	
trimethylhexane-1,6-diami	ne					
aerobic	Not readily bid	odegradable	67/548/EEC	Annex V, C.4.A.	yes	
12.3 Bioaccumulative poter	ntial					
Partition coefficient: nocta		рН	Method		GLP	
Poly[oxy(methyl-1,2-ethan	ediyl)], .alpha(2-a	minomethyl	lethyl)omega(2-a	minomethylethoxy)		
log Pow: 1,34 (25 °C)			OECD Test (Guideline 117	Yes	
3-aminomethyl-3,5,5-trime	thylcyclohexylamir	ne				
log Pow: 0,99			OECD Test (Guideline 107	yes	
12.4 Mobility in soil						

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 Empty containers should be taken to an approved waste handling site for recycling or

Packaging disposal.

14. TRANSPORT INFORMATION

IATA ADR/RID **IMDG** 14.1 UN number UN 2735 UN 2735 UN 2735 14.2 UN proper AMINES, LIQUID, AMINES, LIQUID, AMINES, LIQUID, shipping name CORROSIVE, N.O.S. CORROSIVE, N.O.S. CORROSIVE, N.O.S.

> (PolyoxypropyleneDiamine) (PolyoxypropyleneDiamine) (Polyoxypropylene Diamine)

14.3 Transport class(es) 8 14.4 Packing group Ш Ш Ш Labels 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 This product does not contain substances of

Authorisation (Article 59). very high concern

15.2 Chemical Safety

Not applicable

Assessment

16. OTHER INFORMATION

Full text of abbreviated

R20/22: Harmful by inhalation and if swallowed. Risk phrases

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.