

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Mixture
Name	: AMPRO BIO Fast Hardener
Product code	: 19653
Type of product	: Hardener (Crosslinker)
Product group	: Hardener

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

1.2.1. Relevant identified uses

Intended for general public	
Main use category	: Industrial use, Professional use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Gurit (UK) Ltd
St Cross Business Park Newport
GBR- PO30 5WU Isle of Wight
United Kingdom
T +44 (0) 1983 828 000 (All Technical and Commercial Enquiries)
Regulatory@Gurit.com - www.gurit.com

1.4. Emergency telephone number

Emergency number	: Carechem 24Hrs: +44 (0) 1273 289451 Telephone number for use in case of chemical exposure, spillage or fire only.
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP], as amended for UK law

Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412
Full text of H- and EUH-statements: see section 16	

Adverse physicochemical, human health and environmental effects

Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP], as amended for UK law

Hazard pictograms (GB CLP)



GHS05

GHS07

Signal word (GB CLP)

: Danger

Contains

: 1,6-Hexanediamine, 2,2,4(or 2,4,4)-trimethyl-; Phenol, styrenated; 1,3-Benzenedimethanamine; Trimethylhexamethylenediamine; 3-aminomethyl-3,5,5-trimethylcyclohexylamine

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Hazard statements (GB CLP)	: H302 - Harmful if swallowed. 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 (GB CLP)	: P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P260 - Do not breathe vapours. P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P272 - Contaminated work clothing should not be allowed out of the workplace.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Labelling according to Regulation (EC) No. 1272/2008 [CLP], as amended for UK law
3-aminomethyl-3,5,5-trimethylcyclohexylamine	CAS-No.: 2855-13-2 EC-No.: 220-666-8	10 – 25	Acute Tox. 4 (Oral), H302 (ATE=1030 mg/kg bodyweight) Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 3, H412
1,3-Benzenedimethanamine	CAS-No.: 1477-55-0 EC-No.: 216-032-5	< 25	Acute Tox. 4 (Oral), H302 (ATE=980 mg/kg bodyweight) Acute Tox. 4 (Dermal), H312 (ATE=2000 mg/kg bodyweight) Acute Tox. 4 (Inhalation:dust,mist), H332 (ATE=1,34 mg/l/4h) Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412
1,6-Hexanediamine, 2,2,4(or 2,4,4)-trimethyl-	CAS-No.: 25620-58-0 EC-No.: 247-063-2	5 – 25	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Skin Corr. 1A, H314 Eye Dam. 1, H318 Skin Sens. 1, H317
Trimethylhexamethylenediamine	CAS-No.: 25620-58-0 EC-No.: 247-134-8	< 10	Acute Tox. 4 (Oral), H302 (ATE=910 mg/kg bodyweight) Skin Corr. 1B, H314 Skin Sens. 1, H317
Phenol, styrenated substance identified as having endocrine disrupting properties	CAS-No.: 61788-44-1 EC-No.: 262-975-0	1 – 10	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411
p-toluenesulphonic acid (containing a maximum of 5% H2SO4)	CAS-No.: 104-15-4 EC-No.: 203-180-0	< 3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

Full text of H- and EUH-statements: see section 16

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact	: Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Advice for firefighters

Precautionary measures fire	: Evacuate area.
Firefighting instructions	: Exercise caution when fighting any chemical fire.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: Collect contaminated fire fighting water separately. It must not enter drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Protective clothing.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe vapours.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

6.4. Reference to other sections

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe vapours. Wear personal protective equipment.
Hygiene measures	: Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Separate working clothes from town clothes. Launder separately. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store locked up. Store in a well-ventilated place. Keep cool.
Storage temperature	: ≤ 30 °C Possible pressure build-up
Storage area	: Store away from heat. Store in a well-ventilated place.
Special rules on packaging	: Keep only in original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2 Recommended monitoring procedures

No additional information available

8.1.3 Air contaminants formed

No additional information available

8.1.4 DNEL and PNEC

No additional information available

8.1.5 Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Skin and body protection	
Type	Standard
Tyvek® Gown/Coveralls	EN 13034

Hand protection:

Protective gloves. Time of penetration is to be checked with the glove producer

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	0 (< 10 minutes)	0.26mm		EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

Respiratory protection			
Device	Filter type	Condition	Standard
Disposable half mask	Gas/vapour filter	Vapour protection	EN 405

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Industrial and professional. Perform risk assessment prior to use. Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Mobile liquid.
Colour	: Yellow.
Odour	: Amine-like.
Odour threshold	: Not available
pH	: ≈ 8
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flash point	: > 100 °C Estimated on the basis of the constituents :
Explosive limits	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Relative vapour density at 20°C	: Not available
Relative density	: Not available
Density	: 0,99 g/cm ³
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Viscosity, kinematic	: Not available
Viscosity, dynamic	: 707 cP 25°C
Explosive properties	: Not available

9.2. Other information

VOC content	: 22,5 – 63,2 g/l Directive 2004/42/CE
Particle characteristics	: Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport. Product is not explosive.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK Law.

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

AMPRO BIO Fast Hardener	
ATE UK (oral)	1325,494 mg/kg bodyweight
Phenol, styrenated (61788-44-1)	
LD50 oral rat	2500 mg/kg
LD50 dermal rabbit	> 7940 mg/kg
p-toluenesulphonic acid (containing a maximum of 5% H2SO4) (104-15-4)	
LD50 dermal rabbit	> 2000 mg/kg
1,3-Benzenedimethanamine (1477-55-0)	
LD50 oral	980 (≤ 1180) mg/kg
LD50 dermal rat	2000 mg/kg
LD50 dermal rabbit	> 3100 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	1,34 mg/l/4h

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Trimethylhexamethylenediamine (25620-58-0)	
LD50 oral rat	910 mg/kg
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	
LD50 oral rat	1030 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	5,01 mg/l/4h
Skin corrosion/irritation	: Causes severe skin burns. pH: ≈ 8
Serious eye damage/irritation	: Causes serious eye damage. pH: ≈ 8
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
p-toluenesulphonic acid (containing a maximum of 5% H2SO4) (104-15-4)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
11.2. Information on other hazards	
11.2.1. Endocrine disrupting properties	
No additional information available	
11.2.2. Other information	
No additional information available	
SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - general	: Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.
1,3-Benzenedimethanamine (1477-55-0)	
EC50 72h - Algae [1]	12 mg/l
Trimethylhexamethylenediamine (25620-58-0)	
EC50 72h - Algae [1]	29,5 mg/l (Species: Desmodesmus subspicatus)
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	
EC50 - Crustacea [1]	14,6 – 21,5 mg/l (48 h - Species: Daphnia magna [semi-static])
EC50 72h - Algae [1]	37 mg/l (Species: Desmodesmus subspicatus)
12.2. Persistence and degradability	
AMPRO BIO Fast Hardener	
Persistence and degradability	Rapidly degradable

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

1,6-Hexanediamine, 2,2,4(or 2,4,4)-trimethyl-	
Persistence and degradability	Rapidly degradable
Phenol, styrenated (61788-44-1)	
Persistence and degradability	Rapidly degradable
p-toluenesulphonic acid (containing a maximum of 5% H2SO4) (104-15-4)	
Persistence and degradability	Rapidly degradable
1,3-Benzenedimethanamine (1477-55-0)	
Persistence and degradability	Rapidly degradable
Trimethylhexamethylenediamine (25620-58-0)	
Persistence and degradability	Rapidly degradable
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

Phenol, styrenated (61788-44-1)	
Partition coefficient n-octanol/water (Log Pow)	> 4 (at 22 °C)
Trimethylhexamethylenediamine (25620-58-0)	
Partition coefficient n-octanol/water (Log Pow)	0,77 (at 23 °C)
3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	
Partition coefficient n-octanol/water (Log Pow)	0,79 (at 23 °C)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.
Ecological information	: Avoid release to the environment.




SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

ADR	IMDG	IATA
14.1. UN number		
UN 2735	UN 2735	UN 2735
14.2. UN proper shipping name		
POLYAMINES, LIQUID, CORROSIVE, N.O.S.	POLYAMINES, LIQUID, CORROSIVE, N.O.S.	Polyamines, liquid, corrosive, n.o.s.
Transport document description		
UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (1,6-Hexanediamine, 2,2,4(or 2,4,4)-trimethyl- ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine), 8, II, (E)	UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (1,6-Hexanediamine, 2,2,4(or 2,4,4)-trimethyl- ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine), 8, II	UN 2735 Polyamines, liquid, corrosive, n.o.s. (1,6-Hexanediamine, 2,2,4(or 2,4,4)-trimethyl- ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine), 8, II
14.3. Transport hazard class(es)		
8	8	8
		
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment: False	Dangerous for the environment: False Marine pollutant: No	Dangerous for the environment: False
No supplementary information available		

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: C7
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T11
Portable tank and bulk container special provisions (ADR)	: TP1, TP27
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Hazard identification number (Kemler No.)	: 80
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 2X

Transport by sea

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T11

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Tank special provisions (IMDG)	: TP1, TP27
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: A
Segregation (IMDG)	: SGG18, SG35
Properties and observations (IMDG)	: Colourless to yellowish liquids or solutions with a pungent odour. Miscible with or soluble in water. When involved in a fire, evolve toxic gases. Corrosive to most metals, especially to copper and its alloys. Reacts violently with acids. Cause burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y840
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 851
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

Inland waterway transport

Classification code (ADN)	: C7
Special provisions (ADN)	: 274
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

UK REACH Annex XVII (Restriction List)

This product contains no substance(s) listed on UK REACH Annex XVII (Restriction List) equal to or above the level of SDS disclosure

UK REACH Annex XIV (Authorisation List)

Not applicable.

UK REACH Candidate List (SVHC)

Contains no substance(s) listed on the UK REACH Candidate List

GB PIC regulation (Prior Informed Consent)

Not applicable.

POP Regulation (Persistent Organic Pollutants)

Not applicable.

Ozone Regulation (S.I. No. 168 of 2015)

Not applicable.

Control of Poisons and Explosives Precursors Act

Not applicable.

Drug Precursors Regulation (273/2004)

This product contains no substance(s) listed on the GB Drug Precursors List equal to or above the level of SDS disclosure

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

15.1.2. Other information

VOC content : 22,5 – 63,2 g/l Directive 2004/42/CE

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
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.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Acute Tox. 4 (Oral)	H302	Calculation method
Skin Corr. 1B	H314	Expert judgement
Eye Dam. 1	H318	Calculation method
Skin Sens. 1	H317	Calculation method
Aquatic Chronic 3	H412	Calculation method

Safety Data Sheet (SDS), UK

AMPRO BIO Fast Hardener

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.