



SAFETY DATA SHEET

Altro Proof standard hardener

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

1.1. Product identifier

Product name Altro Proof standard hardener

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

Identified uses Amine hardener for epoxy base - Industrial flooring & wall coatings

1.3. Details of the supplier of the safety data sheet

Supplier Altro Resin Systems Ltd
 Unit 3 Station Rd Industrial Estate
 Maiden Newton
 Dorchester
 Dorset
 DT2 0AE
 Tel: 01300320620
 Fax: 01300321122

 info@altro.com

1.4. Emergency telephone number

Emergency telephone +44(0)1462480480 (Monday-Friday 09.00-17.00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Corr. 1A - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Repr. 2 - H361f

Environmental hazards Aquatic Chronic 3 - H412

Classification (67/548/EEC or 1999/45/EC) Xn;R20/22. Repr. Cat. 3;R62. C;R34. R43. R52/53.

Human health See Section 16 for the full text of the R phrases declared on this section

Environmental See Section 16 for the full text of the R phrases declared on this section

2.2. Label elements

Pictogram



Signal word

Danger

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Hazard statements	H302+H332 Harmful if swallowed or if inhaled. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H361f Suspected of damaging fertility. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P281 Use personal protective equipment as required. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/ attention. P310 Immediately call a POISON CENTER/ doctor. P501 Dispose of contents/ container to ... P501 Dispose of contents/ container in accordance with national regulations.
Contains	BENZYL ALCOHOL, P-tert-butylphenol, 1,3-Benzenedimethanamine, 3-AMINOPROPYLDIMETHYLAMINE, 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, Trimethyl-1,6-hexanediamine

2.3. Other hazards

Not applicable.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

BENZYL ALCOHOL	10-30%
CAS number: 100-51-6	EC number: 202-859-9
Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302	Xn;R20/22
Acute Tox. 4 - H332	
P-tert-butylphenol	10-30%
CAS number: 98-54-4	EC number: 202-679-0
Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Irrit. 2 - H315	Repr. Cat. 3;R62. Xi;R37/38,R41. N;R51/53.
Eye Dam. 1 - H318	
Repr. 2 - H361f	
STOT SE 3 - H335	
Aquatic Chronic 2 - H411	

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1,3-Benzenedimethanamine	5-10%
CAS number: 1477-55-0	EC number: 216-032-5
Classification Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Corr. 1A - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Aquatic Chronic 3 - H412	Classification (67/548/EEC or 1999/45/EC) Xn;R20/22. C;R35. R43,R52/53.
2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL	1-5%
CAS number: 90-72-2	EC number: 202-013-9
Classification Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	Classification (67/548/EEC or 1999/45/EC) Xn;R22 Xi;R36/38
3-AMINOPROPYLDIMETHYLAMINE	1-5%
CAS number: 109-55-7	EC number: 203-680-9
Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317	Classification (67/548/EEC or 1999/45/EC) R10 C;R34 Xn;R22 R43
Trimethyl-1,6-hexanediamine	1-5%
CAS number: 25620-58-0	EC number: 247-134-8
Classification Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Aquatic Chronic 3 - H412	Classification (67/548/EEC or 1999/45/EC) Xn;R22. C;R34. R43,R52/53.
PROPAN-2-OL	<1%
CAS number: 67-63-0	EC number: 200-661-7
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	Classification (67/548/EEC or 1999/45/EC) F;R11 Xi;R36 R67

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

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4.1. Description of first aid measures

Inhalation	Remove casualty from exposure ensuring one's own safety whilst doing so
Ingestion	Wash out mouth with water. Transfer to hospital as soon as possible
Skin contact	Drench the affected skin with running water for 10 minutes or longer if substance is still on skin
Eye contact	Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination

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

Inhalation	There may be irritation of the throat with a feeling of tightness in the chest
Ingestion	There may be soreness and redness of the mouth and throat. Corrosive burns may appear around the lips
Skin contact	An itchy rash may occur at the site of contact
Eye contact	There may be irritation and pain

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

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
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5.2. Special hazards arising from the substance or mixture

Hazardous combustion products	Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m ³ . Oxides of carbon.
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5.3. Advice for firefighters

Protective actions during firefighting	NOTE! Use air-supplied respirators to protect against gases/fumes. Use special protective clothing. Regular protection may not be safe. Keep run-off water out of sewers and water sources. Dike for water control.
Special protective equipment for firefighters	Face mask, protective gloves and safety helmet. Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	For personal protection, see section 8. Eliminate all sources of ignition.
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6.2. Environmental precautions

Environmental precautions	Do not discharge into drains, water courses or onto the ground. Contain the spillage using bunding
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method
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6.4. Reference to other sections

Reference to other sections	The product contains a substance which is hazardous to aquatic organisms and which may cause long term adverse effects in the aquatic environment. See section 12 as well. For waste disposal, see section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling, skin and eye contact. Avoid contact with skin and eyes. Contaminated clothing and shoes must be discarded. Ensure there is sufficient ventilation of the area

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in cool, well ventilated area. Keep container tightly closed.

Storage class Chemical storage. Corrosive storage.

7.3. Specific end use(s)

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

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

PROPAN-2-OL

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³

Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³

WEL = Workplace Exposure Limit

Ingredient comments WEL = Workplace Exposure Limits No exposure limit value known for the mixture

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

Hand protection

Use suitable protective gloves if risk of skin contact. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

Respiratory protection

No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Partition coefficient No data available

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9.2. Other information

Other information Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not available.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks

10.5. Incompatible materials

Materials to avoid Reactive metals (e.g. sodium, calcium, zinc etc.). Materials reactive with hydroxyl compounds. Organic acids (i.e. acetic acid, citric acid etc.). Mineral acids. Sodium hypochlorite. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Nitric acid (HNO₃). Ammonia. Nitrogen oxides (NO_x) Nitrogen oxide can react with water vapors to form corrosive nitric acid Carbon monoxide (CO). Carbon dioxide (CO₂). Aldehydes. Flammable hydrocarbon fragments

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) No data is available on the product itself

ATE oral (mg/kg) 1,324.90692529

Acute toxicity - inhalation

ATE inhalation (gases ppm) 16,825.57487381

ATE inhalation (vapours mg/l) 41.12918302

ATE inhalation (dusts/mists mg/l) 5.60852496

Serious eye damage/irritation

Serious eye damage/irritation Not available.

Skin sensitisation

Skin sensitisation Dermal sensitization to this product or components has been seen in some humans. Components of this product have been found to cause mild skin sensitization in guinea pigs.

Germ cell mutagenicity

Genotoxicity - in vitro The product or a component may be mutagenic, the data is inconclusive.

Carcinogenicity

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Carcinogenicity Not available

Reproductive toxicity

Reproductive toxicity - fertility No data is available on the product itself

Specific target organ toxicity - single exposure

STOT - single exposure Eye disease. Skin disorders and allergies. Neurological disorders.

Target organs Skin Eyes Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Rats exposed orally to 800 mg/kg benzyl alcohol for thirteen weeks exhibited CNS depression and histopathological changes in the brain, thymus and skeletal muscles. The No Observed Adversed Effect Level (NOAL) was 400 mg/kg. No evidence of carcinogenicity was seen in a two-year study with rats and mice. This product contains listed carcinogen(s) according to Directive 67/548/EEC, IARC, ACGIH and/or NTP in concentrations of 0.1 percent of greater. May cause allergic skin reaction.

Aspiration hazard

Aspiration hazard no data available

Inhalation

Can cause severe eye, skin and respiratory tract burns. May cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Severe cases of overexposure can result in respiratory failure.

Ingestion

If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach. Harmful if swallowed.

Skin contact

Causes skin burns. If absorbed through the skin, may cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Harmful in contact with skin.

Eye contact

Corneal edema may give rise to a perception of "blue haze" or "fog" around lights. Exposed individuals may see rings around bright lights. This effect is temporary and has no known residual effect. Product vapor can cause glaucopsia (corneal edema) when absorbed into the tissue of the eye from the atmosphere. Causes eye burns. May cause blindness.

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity No data is available on the product itself

12.2. Persistence and degradability

Persistence and degradability No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential No data is available on the product itself.

Partition coefficient

No data available

12.4. Mobility in soil

Mobility Not available

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment Not available

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12.6. Other adverse effects

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The product should not be allowed to enter drains, water courses or the soil; dispose of this material and its container in a safe way. Contact supplier if guidance is required.

Disposal methods Dispose of container and unused contents in accordance with federal, state, and local requirements.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	3267
UN No. (IMDG)	3267
UN No. (ICAO)	3267
UN No. (ADN)	3267

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
Proper shipping name (IMDG)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
Proper shipping name (ICAO)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
Proper shipping name (ADN)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C7
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels



14.4. Packing group

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

14.5. Environmental hazards

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Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-A, S-B
ADR transport category	3
Emergency Action Code	2X
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

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

SECTION 15: Regulatory information

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

National regulations	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
EU legislation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Guidance	Workplace Exposure Limits EH40. CHIP for everyone HSG(108). Approved Classification and Labelling Guide (Sixth edition) L131.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision date	27/09/2016
Revision	2
SDS number	21385
Risk phrases in full	R10 Flammable. R11 Highly flammable. R20/22 Harmful by inhalation and if swallowed. R22 Harmful if swallowed. R34 Causes burns. R35 Causes severe burns. R36 Irritating to eyes. R36/38 Irritating to eyes and skin. R37/38 Irritating to respiratory system and skin. R41 Risk of serious damage to eyes. R43 May cause sensitisation by skin contact. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R62 Possible risk of impaired fertility. R67 Vapours may cause drowsiness and dizziness.

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Hazard statements in full

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
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.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.