



SAFETY DATA SHEET

Altro Grip 4.5mm slip-resistant hardener

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

1.1. Product identifier

Product name Altro Grip 4.5mm slip-resistant 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. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Repr. 2 - H361fd

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 3 - H412

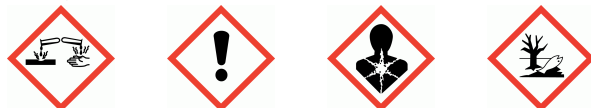
Classification (67/548/EEC or 1999/45/EC) Xn;R20/21/22. Repr. Cat. 3;R62,R63. C;R34. R43. N;R50/53.

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	<p>H302+H332 Harmful if swallowed or if inhaled.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.</p> <p>H400 Very toxic to aquatic life.</p> <p>H412 Harmful to aquatic life with long lasting effects.</p>
Precautionary statements	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P260 Do not breathe vapour/ spray.</p> <p>P261 Avoid breathing vapour/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/ attention.</p> <p>P312 Call a POISON CENTER/ doctor if you feel unwell.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P391 Collect spillage.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
Contains	ISOPHORONEDIAMINE, BENZYL ALCOHOL, Nonylphenol, 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ISOPHORONEDIAMINE	30-60%
CAS number: 2855-13-2	EC number: 220-666-8
Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302	C;R34 Xn;R21/22 R43 R52/53
Acute Tox. 4 - H312	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Skin Sens. 1 - H317	
Aquatic Chronic 3 - H412	

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BENZYL ALCOHOL	30-60%
CAS number: 100-51-6	EC number: 202-859-9
Classification Acute Tox. 4 - H302 Acute Tox. 4 - H332	Classification (67/548/EEC or 1999/45/EC) Xn;R20/22
Nonylphenol	10-30%
CAS number: — M factor (Acute) = 10	
Classification Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Repr. 2 - H361fd Aquatic Acute 1 - H400	
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT; KEROSENE - UNSPECIFIED	5-10%
CAS number: 64742-47-8	EC number: 265-149-8
Classification Asp. Tox. 1 - H304	Classification (67/548/EEC or 1999/45/EC) Xn;R65
2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL	1-5%
CAS number: 90-72-2	EC number: 202-013-9
Classification Skin Corr. 1B - H314 Eye Dam. 1 - H318 Aquatic Chronic 3 - H412	Classification (67/548/EEC or 1999/45/EC) Xi;R36/38. R52/53.

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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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.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

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/m³. Oxides of carbon.

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.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains, water courses or onto the ground. Contain the spillage using bunding

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

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.

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.

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SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

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

Appearance	Liquid.
Odour	Amine.
Odour threshold	Not available.
pH	pH (concentrated solution): 11
Melting point	Not available.
Initial boiling point and range	175°C @
Flash point	>70°C
Evaporation rate	No information available.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	0.08 mm Hg @ °C
Relative density	0.955 @ °C
Solubility(ies)	Not available. Insoluble in water.
Partition coefficient	Not available.

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Auto-ignition temperature	Not available.
Decomposition Temperature	No information available.
Viscosity	30 mPa s @ 20°C
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information

Other information	Not relevant.
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SECTION 10: Stability and reactivity

10.1. Reactivity

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

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not available.
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10.4. Conditions to avoid

Conditions to avoid	Heat, flames and sparks
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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.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Nitric acid (HNO ₃). Ammonia. Nitrogen oxides (NO _x) Nitrogen oxide can react with water vapors to form corrosive nitric acid Carbon monoxide (CO). Carbon dioxide (CO ₂). Aldehydes. Flammable hydrocarbon fragments
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀)	No data is available on the product itself
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ATE oral (mg/kg)	622.81811283
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Acute toxicity - dermal

ATE dermal (mg/kg)	2,558.13953488
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Acute toxicity - inhalation

ATE inhalation (gases ppm)	14,062.5
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ATE inhalation (vapours mg/l)	34.375
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ATE inhalation (dusts/mists mg/l)	4.6875
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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

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

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Bioaccumulative potential No data is available on the product itself.

Partition coefficient Not 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

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) 2735

UN No. (IMDG) 2735

UN No. (ICAO) 2735

14.2. UN proper shipping name

Proper shipping name (ADR/RID) AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE, 4-NONYLPHENOL, Branched)

Proper shipping name (IMDG) AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE, 4-NONYLPHENOL, Branched)

Proper shipping name (ICAO) AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE, 4-NONYLPHENOL, Branched)

Proper shipping name (ADN) AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE, 4-NONYLPHENOL, Branched)

14.3. Transport hazard class(es)

ADR/RID class 8

ADR/RID label 8

IMDG class 8

ICAO class/division 8

Transport labels



14.4. Packing group

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

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS	F-A, S-B
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	16/09/2016
Revision	2
SDS number	21321

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Risk phrases in full

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
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.
R43 May cause sensitisation by skin contact.
R50/53 Very 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.
R63 Possible risk of harm to the unborn child.
R65 Harmful: may cause lung damage if swallowed.

Hazard statements in full

H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
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.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.