



## SAFETY DATA SHEET

### Altro Expand coloured/Altro Expand vertical hardener

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

##### 1.1. Product identifier

**Product name** Altro Expand coloured/Altro Expand vertical hardener

**Product number** E\_H; EV\_H

##### 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

**Uses advised against** Use only for intended applications.

##### 1.3. Details of the supplier of the safety data sheet

<b>Supplier</b>	Altro Resin Systems Ltd Unit 3 Station Rd Industrial Estate Maiden Newton Dorchester Dorset, United Kingdom DT2 0AE Tel: +44(0)1300320620 Fax: 01300321122 sds@altro.com	Altro GmbH Ebertallee 209 06846 Dessau-Roßlau Germany  Tel: +49(0)3406500-0
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<b>Manufacturer</b>	Altro Resin Systems Ltd Unit 3 Station Rd Industrial Estate Maiden Newton Dorchester Dorset, United Kingdom DT2 0AE Tel: +44(0)1300320620 Fax: 01300321122 sds@altro.com	Altro GmbH Ebertallee 209 06846 Dessau-Roßlau Germany  Tel: +49(0)3406500-0
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##### 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 (SI 2019 No. 720)

**Physical hazards** Not Classified

**Health hazards** Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317

**Environmental hazards** Aquatic Chronic 2 - H411

##### 2.2. Label elements

## Altro Expand coloured/Altro Expand vertical hardener

### Hazard pictograms



### Signal word

Danger

### Hazard statements

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

### Precautionary statements

P260 Do not breathe vapour/ spray.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P501 Dispose of contents/ container in accordance with national regulations.

### Contains

2-PIPERAZIN-1-YLETHYLAMINE, BENZYL ALCOHOL, 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, Phenol, styrenated, Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia, Formaldehyde, oligomeric reaction products with 3,3'-iminodi(propylamine), Amines, coco alkyl, Trimethyl-1,6-hexanediamine

### Supplementary precautionary statements

P261 Avoid breathing vapour/ spray.  
 P264 Wash contaminated skin 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.  
 P273 Avoid release to the environment.  
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P302+P352 IF ON SKIN: Wash with plenty of water.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
 P310 Immediately call a POISON CENTER/ doctor.  
 P321 Specific treatment (see medical advice on this label).  
 P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.  
 P362+P364 Take off contaminated clothing and wash it before reuse.  
 P363 Wash contaminated clothing before reuse.  
 P391 Collect spillage.  
 P405 Store locked up.

### 2.3. Other hazards

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

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<b>2-PIPERAZIN-1-YLETHYLAMINE</b>	<b>10-30%</b>
CAS number: 140-31-8                      EC number: 205-411-0	
<b>Classification</b> Acute Tox. 4 - H302 Acute Tox. 4 - H312 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Aquatic Chronic 3 - H412	
<b>BENZYL ALCOHOL</b>	<b>5-10%</b>
CAS number: 100-51-6                      EC number: 202-859-9	
<b>Classification</b> Acute Tox. 4 - H302 Acute Tox. 4 - H332 Eye Irrit. 2 - H319	
<b>2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL</b>	<b>5-10%</b>
CAS number: 90-72-2                      EC number: 202-013-9	
<b>Classification</b> Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Aquatic Chronic 3 - H412	
<b>Phenol, styrenated</b>	<b>5-10%</b>
CAS number: 61788-44-1                      EC number: 262-975-0	
<b>Classification</b> Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411	
<b>Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia</b>	<b>1-5%</b>
CAS number: 9046-10-0	
<b>Classification</b> Skin Corr. 1C - H314 Eye Dam. 1 - H318 Aquatic Chronic 3 - H412	

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<b>Formaldehyde, oligomeric reaction products with 3,3'-iminodi(propylamine)</b>	<b>1-5%</b>
CAS number: 161278-35-9	
<b>Classification</b>	
Acute Tox. 4 - H302	
Acute Tox. 4 - H312	
Acute Tox. 4 - H332	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
<b>Amines, coco alkyl</b>	<b>1-5%</b>
CAS number: 61788-46-3                      EC number: 262-977-1	
M factor (Acute) = 10                      M factor (Chronic) = 1	
<b>Classification</b>	
Acute Tox. 4 - H302	
Skin Corr. 1A - H314	
Eye Dam. 1 - H318	
STOT RE 2 - H373	
Asp. Tox. 1 - H304	
Aquatic Acute 1 - H400	
Aquatic Chronic 1 - H410	
<b>Calcium Nitrate</b>	<b>1-5%</b>
CAS number: 10124-37-5                      EC number: 233-332-1	
<b>Classification</b>	
Ox. Liq. 2 - H272	
Eye Irrit. 2 - H319	
<b>Trimethyl-1,6-hexanediamine</b>	<b>1-5%</b>
CAS number: 25620-58-0                      EC number: 247-134-8	
<b>Classification</b>	
Acute Tox. 4 - H302	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Skin Sens. 1 - H317	
Aquatic Chronic 3 - H412	
<b>ETHANOL</b>	<b>1-5%</b>
CAS number: 64-17-5                      EC number: 200-578-6	
<b>Classification</b>	
Flam. Liq. 2 - H225	
Eye Irrit. 2 - H319	

The full text for all hazard statements is displayed in Section 16.

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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>General information</b>	If in doubt, get medical attention promptly.
<b>Inhalation</b>	Remove person to fresh air and keep comfortable for breathing. If in doubt, get medical attention promptly.
<b>Ingestion</b>	Give plenty of water to drink. Remove person to fresh air and keep comfortable for breathing. Get medical attention immediately.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if symptoms are severe or persist.
<b>Eye contact</b>	Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

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

<b>General information</b>	Treat symptomatically.
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#### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Notes for the doctor</b>	No specific recommendations.
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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Carbon dioxide or dry powder. Water spray, fog or mist.
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#### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.
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#### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	Do not use water jet as an extinguisher, as this will spread the fire. Control run-off water by containing and keeping it out of sewers and watercourses.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Wear protective clothing and gloves.
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#### 6.2. Environmental precautions

<b>Environmental precautions</b>	Do not discharge into drains or watercourses or onto the ground.
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#### 6.3. Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	Absorb spillage with non-combustible, absorbent material. Absorb in vermiculite, dry sand or earth and place into containers. Dispose of contents/container in accordance with local regulations. Provide adequate ventilation.
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#### 6.4. Reference to other sections

<b>Reference to other sections</b>	For personal protection, see Section 8. For waste disposal, see Section 13.
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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

## Altro Expand coloured/Altro Expand vertical hardener

**Usage precautions** Do not handle until all safety precautions have been read and understood. Keep container tightly sealed when not in use. Provide adequate ventilation. Avoid breathing gas, fume, vapours or spray.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions** Keep only in the original container. Store in a cool dry place. Protect from frost.

### 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

#### ETHANOL

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL

WEL = Workplace Exposure Limit.

**Ingredient comments** No exposure limit value known for the mixture

### 8.2. Exposure controls

#### Protective equipment



**Appropriate engineering controls**

Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

**Eye/face protection**

Wear eye protection.

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Frequent changes are recommended. Only use chemical-protective gloves with CE-labelling of category III. To minimise the wetness in the glove due to perspiration changing of gloves during a shift is required. Check the permeability prior to each renewed use of the glove. Preventive skin protection by use of skin-protecting agents is recommended. Material of gloves: Nitrile rubber, NBR; Fluorocarbon rubber (Viton); Recommended thickness of the material:  $\geq 0.5$  mm. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application; Penetration time of glove: The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed. As protection from splashes gloves made of the following materials are suitable: PVC gloves. Not suitable are gloves made of the following materials: Leather gloves, Strong gloves.

**Other skin and body protection**

Avoid contact with skin. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

**Hygiene measures**

Promptly remove any clothing that becomes contaminated. Wash hands thoroughly after handling. When using do not eat, drink or smoke.

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**Respiratory protection** Ensure all respiratory protective equipment is suitable for its intended use and is 'UKCA'-marked. Combination filter, type A2/P2.

**Environmental exposure controls** Keep container tightly sealed when not in use.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

**Appearance** Colourless to pale yellow liquid.

**Odour** Amine.

**pH** No specific test data are available.

**Flash point** ~ 120°C

**Relative density** ~ 1.03g/CC

**Auto-ignition temperature** No information available.

**Viscosity** No specific test data are available.

#### 9.2. Other information

### 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** None known.

#### 10.4. Conditions to avoid

**Conditions to avoid** Avoid exposure to high temperatures or direct sunlight. Avoid freezing.

#### 10.5. Incompatible materials

**Materials to avoid** None known.

#### 10.6. Hazardous decomposition products

**Hazardous decomposition products** None known.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Toxicological effects** Information given is based on data of the components and of similar products.

#### Acute toxicity - oral

**ATE oral (mg/kg)** 1,563.36

#### Acute toxicity - dermal

**ATE dermal (mg/kg)** 5,714.29

#### Acute toxicity - inhalation

**ATE inhalation (gases ppm)** 45,226.13

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ATE inhalation (vapours mg/l) 77.41

ATE inhalation (dusts/mists mg/l) 15.08

### SECTION 12: Ecological information

#### 12.1. Toxicity

**Toxicity** Toxic to aquatic organisms

#### 12.2. Persistence and degradability

**Persistence and degradability** No data available.

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

#### 12.4. Mobility in soil

**Mobility** Do not allow to escape to waterways, waste water or soil.

#### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** Not available

#### 12.6. Other adverse effects

**Other adverse effects** Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water. Do not allow product to reach ground water, water bodies or sewage system. Danger to drinking water if even small quantities leak into soil.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**General information** Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered.

### 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. ( 2,4,6,-TRIS(DIMETHYLAMINOETHYL)PHENOL; amines coco alkyl)

**Proper shipping name (IMDG)** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. ( 2,4,6,-TRIS(DIMETHYLAMINOETHYL)PHENOL; amines coco alkyl)

**Proper shipping name (ICAO)** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. ( 2,4,6,-TRIS(DIMETHYLAMINOETHYL)PHENOL; amines coco alkyl)



## Altro Expand coloured/Altro Expand vertical hardener

**Proper shipping name (ADN)** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. ( 2,4,6,-  
TRIS(DIMETHYLAMINOETHYL)PHENOL; amines coco alkyl)

### 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	II
IMDG packing group	II
ICAO packing group	II
ADN packing group	II

### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



### 14.6. Special precautions for user

IMDG Code segregation group	18. Alkalis
EmS	F-A, S-B
ADR transport category	2
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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

## SECTION 15: Regulatory information

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

### 15.2. Chemical safety assessment

## Altro Expand coloured/Altro Expand vertical hardener

No chemical safety assessment has been carried out.

### SECTION 16: Other information

<b>Abbreviations and acronyms used in the safety data sheet</b>	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. CAS: Chemical Abstracts Service. GHS: Globally Harmonized System. REACH: The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577.
<b>Revision date</b>	20/07/2022
<b>Revision</b>	5
<b>Supersedes date</b>	04/12/2020
<b>SDS number</b>	21380
<b>Hazard statements in full</b>	H225 Highly flammable liquid and vapour. H272 May intensify fire; oxidiser. 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. 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. H373 May cause damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.

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 process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.