

Revision Date 27/01/2014  
Revision 5  
Supersedes date 31/10/2013



## SAFETY DATA SHEET

### ALOCIT H1 HARDENER

Alocit International Ltd  
is an A&E Group Company

[www.ae-sys.com](http://www.ae-sys.com)



## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

### 1.1. Product identifier

Product name ALOCIT H1 HARDENER  
Product No. AS33051A

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

Identified uses ACTIVATING HARDENER FOR TWO-PART COATING SYSTEM

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

Supplier ALOCIT INTERNATIONAL LTD, 3 Charles Wood Rd, Dereham, NR19 1SX UK  
Phone: +44 (0)1362-694915 Fax: + 44 (0)1362-695350

### 1.4. Emergency telephone number

24 HR EMERGENCY TELEPHONE NUMBER - UK: 44 7825 987326 US: 1 800 535 5053

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

**Physical and Chemical Hazards:** Not classified.

**Human health:** Acute Tox. 4 - H302; Acute Tox. 4 - H312; Acute Tox. 4 - H332; Skin Corr. 1B - H314; Skin Sens. 1 - H317

**Environment:** Aquatic Chronic 3 - H412

Classification (1999/45/EEC) Xn; R20/21/22. C; R34. R43. R52/53.

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

**Human health:** Corrosive. Prolonged contact causes serious eye and tissue damage.

**Environment:** Contains a substance which causes risk of hazardous effects to the environment.

### 2.2. Label elements



**Contains:** ISOPHORONEDIAMINE Trimethylhexamethyldiamine

Label In Accordance With (EC) No. 1272/2008

**Signal Word** Danger

*Note: all safety data refers to unmixed component of a two-component system. Mixed and cured epoxies are chemically inert*

**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, H332 Harmful if inhaled, 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, P305+351+338 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, P501 Dispose of contents/container in accordance with local regulations.

**Supplementary Precautionary Statements:** 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, P260 Do not breathe vapour/spray, P261 Avoid breathing vapour/spray, P264 Wash contaminated skin thoroughly after handling, P321 Specific treatment (see medical advice on this label), P301+312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell, P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting, P302+352 IF ON SKIN: Wash with plenty of soap and water, P303+361+353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower, P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing, P312 Call a POISON CENTER or doctor/physician if you feel unwell, P322 Specific measures (see ... on this label), P330 Rinse mouth, P333+313 If skin irritation or rash occurs: Get medical advice/attention, P363 Wash contaminated clothing before reuse, P405 Store locked up.

### 2.3. Other hazards

This product does not contain any PBT or vPvB substances.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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### 3.2. Mixtures

#### **BENZYL ALCOHOL**

**10-20%**

CAS-No.: 100-51-6

EC No.: 202-859-9

Classification (EC 1272/2008)

Classification (67/548/EEC)

Acute Tox. 4 - H302

Xn;R20/22

Acute Tox. 4 - H332

#### **ISOPHORONEDIAMINE**

**10-20%**

CAS-No.: 2855-13-2

EC No.: 220-666-8

Classification (EC 1272/2008)

Classification (67/548/EEC)

Acute Tox. 4 - H302

C;R34

Acute Tox. 4 - H312

Xn;R21/22

Skin Corr. 1B - H314

R43

Skin Sens. 1 - H317

R52/53

Aquatic Chronic 3 - H412

#### **Trimethylhexamethyldiamine**

**10-20%**

CAS-No.: 25620-58-0

EC No.:

Classification (EC 1272/2008)

Classification (67/548/EEC)

Not classified.

Xn;R22.

C;R34.

R43.

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

*Note: all safety data refers to unmixed component of a two-component system. Mixed and cured epoxies are chemically inert*

## SECTION 4: FIRST AID MEASURES

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### 4 . 1 . Description of first aid measures

**Inhalation:** Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Keep the affected person warm and at rest. Get prompt medical attention.

**Ingestion:** DO NOT INDUCE VOMITING! NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Remove victim immediately from source of exposure. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Get medical attention immediately! Provide rest, warmth and fresh air.

**Skin contact:** Remove affected person from source of contamination. Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Do not use organic solvents Get medical attention if any discomfort continues.

**Eye contact:** Remove victim immediately from source of exposure. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention. Get medical attention promptly if symptoms occur after washing.

### 4 . 2 . Most important symptoms and effects , both acute and delayed

**General information:** Seek medical attention in case of contact with skin and eyes or inhalation or ingestion.

**Inhalation:** Harmful effects from inhalation.

**Ingestion:** Harmful effects if ingested.

**Skin contact:** Prolonged skin contact may cause redness and irritation. May cause sensitisation by skin contact.

**Eye contact:** Irritating and may cause redness and pain.

### 4 . 3 . Indication of any immediate medical attention and special treatment needed

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY! If necessary , administer activated charcoal (10-20g) and sodium sulfate (20g)

## SECTION 5: FIREFIGHTING MEASURES

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### 5 . 1 . Extinguishing media

**Extinguishing media:** Carbon dioxide (CO<sub>2</sub>). Foam. Water spray, fog or mist.

**Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

### 5 . 2 . Special hazards arising from the substance or mixture

**Hazardous combustion products:** Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Nitric acid (HNO<sub>3</sub>). Ammonia or amines.

**Unusual Fire & Explosion Hazards:** HIGHLY FLAMMABLE! May ignite at high temperature. May develop highly toxic or corrosive fumes if heated.

**Specific hazards:** The product is flammable, and heating may generate vapours which may form explosive vapour/air mixtures. Fire creates: Vapours/gases/fumes of: Ammonia or amines. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Nitric acid (HNO<sub>3</sub>). Phosphorus.

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### 5 . 3 . Advice for firefighters

**Special Fire Fighting Procedures:** Avoid breathing fire vapours. Keep up-wind to avoid fumes. Ventilate closed spaces before entering them. Containers close to fire should be removed or cooled with water. Keep unnecessary and unprotected personnel from entering the area. Use water mist to cool any containers.

**Protective equipment for fire-fighters:** Wear full protective clothing. Use air-supplied respirator, gloves and protective goggles.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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### 6 . 1 . Personal precautions , protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet. Eye contact **MUST** be prevented by means of suitable personal protection equipment. Wear protective gloves. Avoid inhalation of vapours and contact with skin and eyes.

### 6 . 2 . Environmental precautions

Do not discharge into drains, water courses or onto the ground.

### 6 . 3 . Methods and material for containment and cleaning up

Stop leak if possible without risk. **DO NOT** touch spilled material. Wear necessary protective equipment. Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage. Runoff or release to sewer, waterway or ground is forbidden. Inform Authorities if large amounts are involved.

### 6 . 4 . Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet.

## SECTION 7: HANDLING AND STORAGE

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### 7 . 1 . Precautions for safe handling

Avoid spilling, skin and eye contact. Provide good ventilation.

### 7 . 2 . Conditions for safe storage , including any incompatibilities

Store in tightly closed original container in a dry, cool, well-ventilated place. Keep in original container.

**Storage Class:** Chemical storage.

### 7 . 3 . Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 8 . 1 . Control parameters

### 8 . 2 . Exposure controls

Protective equipment



**Process conditions:** Provide eyewash station.

**Engineering measures:** No specific ventilation requirements noted, except this product must not be used in a confined space without good ventilation.

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**Respiratory equipment:** No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

**Hand protection:** Protective gloves should be used if there is a risk of direct contact or splash.

**Eye protection:** Wear approved safety goggles.

**Other Protection:** AVOID ALL SKIN AND RESPIRATORY CONTACT! 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. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9 . 1 . Information on basic physical and chemical properties

Appearance	Viscous liquid.
Colour	Amber.
Odour	Ammonia.
Initial boiling point and boiling range (°C)	>200 760 mm Hg
Relative density	1.020
pH-Value, Conc. Solution	11
Viscosity	12.0 Ps 25
Flash point (°C)	>100 CC (Closed cup).
Partition Coefficient (N-Octanol/Water)	Not available.

### 9 . 2 . Other information

Not known.

## SECTION 10: STABILITY AND REACTIVITY

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**10 . 1 . Reactivity:** Exothermic reaction with: Rubber or plastic. Plastics or coatings may be corroded. Avoid Heat (temperatures above flash point) , sparks , ignition points , flames , static electricity.

**10 . 2 . Chemical stability:** Stable under normal temperature conditions.

**10 . 3 . Possibility of hazardous reactions:** None under normal conditions.

**10 . 4 . Conditions to avoid:** Avoid contact with acids and oxidising substances.

### 10 . 5 . Incompatible materials

**Materials To Avoid:** Strong acids. Strong oxidising substances. Copper. Zinc. Nickel. Alcohol Aldehydes. Ketones Halogenated hydrocarbons.

**10 . 6 . Hazardous decomposition products:** High temperatures generate: Vapours/gases/fumes of: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO).

## SECTION 11: TOXICOLOGICAL INFORMATION

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### 11 . 1 . Information on toxicological effects

**Toxicological information:** No information available.

**Acute toxicity :** Acute Toxicity (Oral LD50) Not available.

Acute Toxicity (Inhalation LC50) Not available.

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**Serious eye damage / irritation :** Not available.

**Respiratory or skin sensitisation :**

**Respiratory sensitisation:** Not available.

**Skin sensitisation:** Not available.

**Germ cell mutagenicity :**

**Genotoxicity - In Vitro:** Not available.

**Genotoxicity - In Vivo:** Not available.

**Carcinogenicity :**

**Carcinogenicity:** Not available.

**Reproductive Toxicity :**

**Reproductive Toxicity - Fertility:** Not available.

**Reproductive Toxicity - Development:** Not available.

**Specific target organ toxicity - single exposure :**

**STOT - Single exposure:** Not available.

**Specific target organ toxicity - repeated exposure :**

**STOT - Repeated exposure:** Not available.

**Inhalation:** Harmful by inhalation.

**Ingestion:** Harmful if swallowed.

**Skin contact:** May cause sensitisation by skin contact. Harmful in contact with skin. Causes burns.

**Eye contact:** Irritating to eyes.

**Route of entry:** Inhalation. Ingestion. Skin and/or eye contact.

**Toxicological information on ingredients .**

BENZYL ALCOHOL ( CAS : 100 - 51 - 6 )

ISOPHORONEDIAMINE ( CAS : 2855 - 13 - 2 )

Trimethylhexamethyldiamine ( CAS : 25620 - 58 - 0 )

## **SECTION 12: ECOLOGICAL INFORMATION**

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**Ecotoxicity:** Dangerous for the environment: May cause long-term adverse effects in the aquatic environment.

### **12 . 1 . Toxicity**

Acute Toxicity - Fish: Not available.

Acute Toxicity - Aquatic Invertebrates Not available.

Acute Toxicity - Aquatic Plants Not available.

Acute Toxicity - Microorganisms Not available.

### **12 . 2 . Persistence and degradability**

**Degradability:** There are no data on the degradability of this product.

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### 12 . 3 . Bioaccumulative potential

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

**Partition coefficient:** Not available.

### 12 . 4 . Mobility in soil

**Mobility:** Not determined.

### 12 . 5 . Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

### 12 . 6 . Other adverse effects

None known.

## SECTION 13: DISPOSAL CONSIDERATIONS

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### 13 . 1 . Waste treatment methods:

Dispose of waste and residues in accordance with local authority requirements.

## SECTION 14: TRANSPORT INFORMATION

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### 14 . 1 . UN number

UN No. (ADR/RID/ADN)	2735
UN No. (IMDG)	2735
UN No. (ICAO)	2735

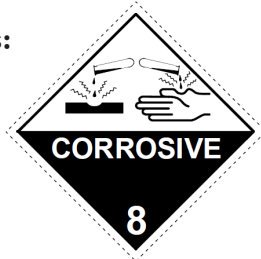
### 14 . 2 . UN proper shipping name

**Proper Shipping Name:** POLYAMINES, LIQUID, CORROSIVE, N.O.S (Isophoronediamine + Trimethylhexamethyldiamine mixture)

### 14 . 3 . Transport hazard class(es)

ADR/RID/ADN	Class 8
ADR/RID/ADN Class	Class 8: Corrosive substances.
ADR Label	No. 8
IMDG	Class 8
ICAO Class/Division	8

### Transport Labels:



### 14 . 4 . Packing group

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

### 14 . 5 . Environmental hazards

**Environmentally Hazardous Substance/Marine Pollutant:** No.

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## 14 . 6 . Special precautions for user

EMS	F-A, S-B
Emergency Action Code	3X
Hazard No. (ADR)	80
Hazard No. (ADR)	80 Corrosive or slightly corrosive substance.
Tunnel Restriction Code	(E)

## 14 . 7 . Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC Code

Not applicable.

## SECTION 15: REGULATORY INFORMATION

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### 15 . 1 . Safety , health and environmental regulations / legislation specific for the substance or mixture

**UK Regulatory References:** Chemicals (Hazard Information & Packaging) Regulations.

**Statutory Instruments:** The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

**Approved Code Of Practice:** Safety Data Sheets for Substances and Preparations. Classification and Labelling of Substances and Preparations Dangerous for Supply.

**Guidance Notes:** Workplace Exposure Limits EH40. CHIP for everyone HSG(108).

**EU Legislation:** Dangerous Preparations Directive 1999/45/EC. 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), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

### 15 . 2 . Chemical Safety Assessment

No chemical safety assessment has been carried out.

## SECTION 16: OTHER INFORMATION

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**General information:** Only trained personnel should use this material.

Revision Date	27/01/2014
Revision	5
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### Risk Phrases In Full

R34	Causes burns.
R20/22	Harmful by inhalation and if swallowed.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R22	Harmful if swallowed.
R21/22	Harmful in contact with skin and if swallowed.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R43	May cause sensitisation by skin contact.

*Note: all safety data refers to unmixed component of a two-component system. Mixed and cured epoxies are chemically inert*



## Hazard Statements In Full

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.
H332	Harmful if inhaled.
H412	Harmful to aquatic life with long lasting effects.

**Uncured Resin:** All risk statements refer to unmixed resin product. Users should check MSDS for hardener before mixing and be aware that, once resin and hardener are mixed and cured, product is inert.

**Cured product:** Cured epoxy products are inert and relatively harmless, traces of residual components may be left on the surface. Abrading will generate particles that should not be inhaled or ingested. Wet surfaces where possible before abrading. Provide ventilation, wear a suitable mask, gloves and cover exposed skin to prevent contact with the dust.

All information is based on results gained from experience and tests and is believed to be accurate but is given without acceptance of liability for loss or damage attributable to reliance thereon as conditions of use lie outside our control. Users should always carry out sufficient tests to establish the suitability of any products for their intended applications. All goods supplied subject to AIL General Conditions of sale.

Alocit Systems products are manufactured and distributed by the A&E Group

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