SAFETY DATA SHEET

EPOXY FLOORCOAT HARDENER

1. IDENTIFICATION
GHS Product Identifier
Epoxy Floorcoat Hardener

Product Code(s)
AEFLH

Company Name
Alchemis Limited

Address
28C Andromeda Crescent, East Tamaki, Auckland 2013

Telephone/Fax Number
Telephone: +64 9 274 6652 Fax number: +64 9 274 6640

Emergency phone number
New Zealand Poison Centre 0800 764 766 (24H)

E-mail Address
compliance@alchemis.co.nz

Recommended use of the chemical and restrictions on use
Industrial application

2. HAZARD IDENTIFICATION
GHS classification of the substance/mixture
Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.

<table>
<thead>
<tr>
<th>HSNO CLASSIFICATION</th>
<th>GHS HAZARD STATEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1C</td>
<td>H226 Flammable liquid and vapour.</td>
</tr>
<tr>
<td>6.1D (oral)</td>
<td>H302 Harmful if swallowed.</td>
</tr>
<tr>
<td>6.1E (dermal)</td>
<td>H313 May be harmful in contact with skin.</td>
</tr>
<tr>
<td>6.5B</td>
<td>H317 May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>6.8B</td>
<td>H361 Suspected of damaging fertility of the unborn child.</td>
</tr>
<tr>
<td>8.2B</td>
<td>H314 Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>8.3A</td>
<td>H318 Causes serious eye damage.</td>
</tr>
<tr>
<td>9.1A</td>
<td>H410 Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>9.2C</td>
<td>H423 Harmful to the soil environment.</td>
</tr>
<tr>
<td>9.3C</td>
<td>H433 Harmful to terrestrial vertebrates.</td>
</tr>
</tbody>
</table>

Signal Word: DANGER

PREVENTION STATEMENTS

<table>
<thead>
<tr>
<th>PREVENTION STATEMENTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>P102</td>
<td>Keep out of reach of children.</td>
</tr>
<tr>
<td>P103</td>
<td>Read label before use.</td>
</tr>
<tr>
<td>P201</td>
<td>Obtain special instructions before use.</td>
</tr>
<tr>
<td>P202</td>
<td>Do not handle until all safety precautions have been read and understood.</td>
</tr>
<tr>
<td>P210</td>
<td>Keep away from heat/sparks/open flames/hot surfaces. No smoking.</td>
</tr>
<tr>
<td>P233</td>
<td>Keep container tightly closed.</td>
</tr>
<tr>
<td>P240</td>
<td>Ground/bond container and receiving equipment.</td>
</tr>
<tr>
<td>P241</td>
<td>Use explosion-proof electrical/ventilating/lighting equipment.</td>
</tr>
<tr>
<td>P242</td>
<td>Use only non-sparking tools.</td>
</tr>
</tbody>
</table>
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P243 Take precautionary measures against static discharge.
P260 Do not breathe mist/vapours/spray.
P264 Wash 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.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

RESPONSE STATEMENTS
P370 + P378 In case of fire: Use foam, carbon dioxide or dry chemical powder for extinction.
P101 If medical advice is needed, have product container or label at hand.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P308 + P313 IF EXPOSED OR CONCERNED: Get medical advice/attention.
P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338 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.
P391 Collect spillage.

STORAGE STATEMENTS
P405 Store locked up.
P403 + P235 Store in a well-ventilated place. Keep cool.

DISPOSAL STATEMENTS
P501 Do not let this product enter the environment. Do not dispose of in waterways or sewers. Dispose of this material and its container as hazardous waste, via a licensed facility. See local council for disposal/recycling information.

GHS DIAMONDS

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS</th>
<th>Proportion - %w/w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl Alcohol</td>
<td>100-51-6</td>
<td>20-30</td>
</tr>
<tr>
<td>Diamine</td>
<td>Not available</td>
<td>20-30</td>
</tr>
<tr>
<td>Nonyl Phenol</td>
<td>84852-15-3</td>
<td>10-20</td>
</tr>
<tr>
<td>Epoxy Resin</td>
<td>28064-14-4</td>
<td>10-20</td>
</tr>
<tr>
<td>Industrial Methylated Spirits</td>
<td>64-17-5/67-56-1</td>
<td>10-20</td>
</tr>
<tr>
<td>Polyamide Resin</td>
<td>Not available</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Mannich Base</td>
<td>Not available</td>
<td>&lt;5</td>
</tr>
</tbody>
</table>

Ingredients determined not to be hazardous or below the hazardous threshold, including water To 100%

Preparation Description
Epoxy hardener

4. FIRST-AID MEASURES

Inhalation

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If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention.

Ingestion
Do not induce vomiting. Wash out mouth thoroughly with water. Seek medical attention.

Skin
Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye contact
If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

First Aid Facilities
Eyewash and normal washroom facilities.

Advice to Doctor
Treat symptomatically.

Other Information
For advice in an emergency, contact the National Poisons Centre (0800 764 766), or a doctor, at once.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Carbon dioxide, dry chemical, foam, water fog or water mist.

Unsuitable Extinguishing Media
High volume water jet.

Hazards from Combustion Products
Decomposition products may include:
Oxides of carbon and nitrogen, and other noxious products.

Specific Hazards Arising from The Chemical
In a fire or heated, a pressure increase will occur, and the container may burst.

Decomposition Temperature
Not available

Precautions in connection with Fire
Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures
Increase ventilation. If possible, contain the spill. Wear appropriate personal protective equipment and clothing to prevent exposure. Spillage can be slippery. Use spark-proof and explosion-proof equipment. Place inert absorbent material onto spillage. Collect the material and place into a suitable labelled container. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations. Dispose of waste according to the applicable local and national regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Use only in a well ventilated area. Keep containers tightly closed. Prevent the buildup of dusts, mists or vapours in the work atmosphere. Follow precautions listed in section 2 for handling flammable liquids. Maintain high standards of personal hygiene i.e. washing hands prior to eating, drinking, smoking or using toilet facilities.

Conditions for safe storage, including any incompatibilities
Protect from freezing. Store in a cool, dry, well-ventilated area, out of direct sunlight. Store in suitable, labelled containers. Ensure that storage conditions comply with applicable local and national regulations.
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

NZ-WES

Ethanol CAS 64-17-5
TWA: 1000 ppm, 1880 mg/m3
Methanol CAS 67-56-1
TWA: 200 ppm, 262 mg/m3
STEL: 250 ppm, 328 mg/m3

Biological Limit Values
No biological limits allocated.

Appropriate Engineering Controls
Use with good general ventilation. If mists or vapours are produced, local exhaust ventilation should be used.

Respiratory Protection
If engineering controls are not effective in controlling airborne exposure, then an approved respirator with a replaceable vapor/mist filter should be used. If engineering controls are not effective in controlling airborne exposure, then an approved respirator with a replaceable vapor/mist filter should be used. Reference should be made to Australia/New Zealand Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye Protection
Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection
Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection
Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form
Liquid

Colour
Yellow straw

Odour
Slight ammonia odour

Decomposition Temperature
Not available

Melting Point
Not available

Boiling Point
85°C

Solubility in Water
Miscible

Specific Gravity
1.01
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pH when packed
Not applicable

Vapour Pressure
Not available

Vapour Density (Air=1)
Not available

Evaporation Rate
Not available

Odour Threshold
Not available

Partition Coefficient: n-octanol/water
Not available

Flash Point
35°C

Flammability
Flammable liquid

Auto-Ignition Temperature
Not available

Flammable Limits – Lower
(Methylated Spirits)
3.3% v/v

Flammable Limits – Upper
(Methylated Spirits)
19.0% v/v

Kinematic Viscosity
Not available

Dynamic Viscosity
Not available

Freeze thaw stability
Not applicable

10. STABILITY AND REACTIVITY
Reactivity
Refer to Section 10: Possibility of hazardous reactions

Chemical Stability
Stable under normal conditions of storage and handling

Conditions to Avoid
Extremes of temperature and direct sunlight. Protect from freezing.

Incompatible materials
Strong oxidising agents. Strong acids and bases.

Hazardous Decomposition Products
Thermal decomposition may result in the release of toxic and/or irritating fumes.

Possibility of hazardous reactions
Not available

Hazardous Polymerization
Will not occur.
11. TOXICOLOGICAL INFORMATION

Toxicology Information
Calculated Acute Toxicity:
Oral – 1701 mg/kg
Dermal – 3401 mg/kg

Ingestion
Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

Inhalation
Inhalation of product vapours may cause irritation of the nose, throat and respiratory system.

Skin
May be corrosive to skin. The symptoms may include redness, itching and swelling.

Eye
May be corrosive to eyes. The symptoms may include redness, itching and tearing.

Chronic Effects
Prolonged or repeated skin contact may cause defatting leading to dermatitis.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Ecotoxic according to criteria of HSNO.
H410 Very toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Nonyl Phenol Ecotoxic Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to fish flow-through test LC50 - Lepomis macrochirus - 0.209 mg/l - 96 h</td>
</tr>
<tr>
<td>Toxicity to daphnia and other aquatic invertebrates semi-static test EC50 - Daphnia magna (Water flea) - 0.0844 mg/l - 48 h</td>
</tr>
<tr>
<td>Toxicity to algae static test EC50 - Selenastrum capricornutum (green algae) - 0.33 mg/l - 72 h</td>
</tr>
</tbody>
</table>

Persistence and degradability: Not available

Mobility: Not available

Bioaccumulative Potential: Not available

Other Adverse Effects: Not available

Environmental Protection
Prevent this material entering waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Disposal considerations
The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations. Product Disposal:

This product can be disposed through a licensed commercial waste collection service. Product wastes are controlled wastes and should be disposed of in accordance with all applicable local and national regulations. This is a water-based/water-soluble product and therefore can be sent through a Waste Water Treatment Plant and after treatment can be discharged into environment through the sewerage or drainage systems as authorized. Personal protective clothing and equipment as specified in Section 8 of this SDS must be worn during handling and disposal of this product. The ventilation requirements as specified in the same section must also be followed, and the precautions given in Section 7 of this SDS regarding handling must also be followed. Do not dispose into the sewerage system. Dispose of waste according to applicable local and national regulations. In New Zealand, the disposal agency or contractor must comply with the New Zealand Hazardous Substances (Disposal) Regulations 2001. Further details regarding disposal can be obtained on the ERMA New Zealand website under specific group standards.

Container Disposal: The container or packaging must be cleaned and rendered incapable of holding any substance. It can then be disposed of in a manner consistent with that of the substance it contained. In this instance the packaging can be disposed through a commercial waste collection service. Alternatively, the container or packaging can be recycled if the hazardous residues have been thoroughly cleaned or rendered non-hazardous. In New Zealand, the packaging (that may or
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may not hold any residual substance) that is lawfully disposed of by householders or other consumers through a public or commercial waste collection service is a means of compliance with regulations.

14. TRANSPORT INFORMATION
Transport Information
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Regulated for transport

<table>
<thead>
<tr>
<th>UN Number</th>
<th>Proper Shipping Name</th>
<th>Class</th>
<th>Packing Group</th>
<th>Hazchem</th>
<th>Marine Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>3470</td>
<td>Paint, Corrosive, Flammable</td>
<td>8, 3</td>
<td>II</td>
<td>3W</td>
<td>Yes</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION
Regulatory information
Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.

<table>
<thead>
<tr>
<th>HSNO Classification</th>
<th>Group Standard</th>
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<tbody>
<tr>
<td>3.1C, 6.1D(oral), 6.1E(dermal), 6.5B, 6.8B, 8.2B, 8.3A, 9.1A, 9.2C, 9.3C</td>
<td>HSR002663 Surface Coatings &amp; Colorants – Flammable, Corrosive</td>
</tr>
</tbody>
</table>

HSNO CONTROLS
Level 2: MSDS required when any quantity is present in a workplace.
At least 2 x 4.5kg powder fire extinguishers required when 500L is present in a workplace.
Level 3: Emergency Response Plan and Secondary Containment required when >1000L is present in a workplace
Flammable signage required when >1000L is stored.
Toxic signage required when >10,000L is stored.
Corrosive Signage required when >250L is stored.
Ecotoxic signage required when >100L is stored.
Location and transit depot test certification required for quantities greater than: 500L (closed containers >5L), 1500L (closed containers up to 5L), 250L (open containers).
Hazardous atmosphere zone required for quantities greater than: 100L (closed containers), 25L (decanting), 5L (open occasionally), 1L (open containers in continuous use).
Approved Handler: Not required.
Tracking: Not required.
Any existing national regulations on the handling of dangerous substances should be observed.
Controls for hazardous substances are based upon current knowledge. Where multiple chemicals are stored, controls will need to take into account aggregate quantities. Contact an EPA/WorkSafe approved test certifier for further information and guidance.

16. OTHER INFORMATION
Contact Person/Point
IMPORTANT ADVICE: This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including its use in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact the supplier listed in section 1 of the SDS. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.
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Technical Contact Numbers
For further information, contact Alchemis Ltd on +64 9 274 6652, however, in emergencies contact 0800 734 607

END OF SDS