

### Liquid Epoxy Resin

## Safety Data Sheet

Hazardous Chemical, Dangerous Goods

#### 1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

PRODUCT NAME	Megapoxy 34 - Part B
RECOMMENDED USE	Liquid epoxy hardener for use in civil engineering.
SUPPLIER	Vivacity Engineering Pty Ltd.
ABN	78 305 545 664
STREET ADDRESS	3 Sefton Road Thornleigh NSW 2120 Australia
TELEPHONE	+61 2 9875 3044
EMAIL	info@megapoxy.com
EMERGENCY TELEPHONE NUMBER	<b>+61 2 9875 3044</b> Australia: 13 11 26 (Poisons Information Centre) New Zealand: 0800 764 766 (NZ Poisons & Hazardous Chemicals Centre)

#### 2. HAZARDS IDENTIFICATION

This material is hazardous according to health criteria of Safe Work Australia GHS 7.



SIGNAL WORD	Danger
HAZARD CLASSIFICATIONS	Acute Toxicity - Oral - Category 3 Acute Toxicity - Dermal - Category 3 Acute Toxicity - Inhalation - Category 2 Skin Corrosion/Irritation - Category 1A Serious Eye Damage/Irritation - Category 1 Chronic Hazard to the Aquatic Environment - Category 2

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<b>HAZARD STATEMENTS</b>	H301	Toxic if swallowed.
	H311	Toxic in contact with skin.
	H314	Causes severe skin burns and eye damage.
	H318	Causes serious eye damage.
	H330	Fatal if inhaled.
	H411	Toxic to aquatic life with long lasting effects.
<b>PREVENTION PRECAUTIONARY STATEMENTS</b>	P260	Do not breathe dust, fume, gas, mist, vapours or spray.
	P264	Wash hands, face and all exposed skin thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	P273	Avoid release to the environment.
	P280	Wear protective clothing, gloves, eye/face protection and suitable respirator.
<b>RESPONSE PRECAUTIONARY STATEMENTS</b>	P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P304+P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position 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.
	P310	Immediately call a POISON CENTER or doctor/physician.
<b>STORAGE PRECAUTIONARY STATEMENT</b>	P405	Store locked up.
<b>DISPOSAL PRECAUTIONARY STATEMENT</b>	P501	Dispose of contents/container in accordance with local, regional, national and international regulations.
<b>POISON SCHEDULE</b>	S5. Caution	
<b>DANGEROUS GOOD CLASSIFICATION</b>	Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".	
<b>DANGEROUS GOODS CLASS</b>	8	
<b>Subrisk 1:</b>	6.1	

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### 3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
Cresylic acid	1319-77-3	10-29 %
Cyclohexanamine, 4,4'-methylenebis[2-methyl-	6864-37-5	30-60 %
Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-	2855-13-2	1-9 %
Phosphorous acid, triphenyl ester	101-02-0	10-29 %
Ingredients determined to be Non-Hazardous		Balance
		100%

### 4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

<b>INHALATION</b>	Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have a qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek immediate medical advice.
<b>SKIN CONTACT</b>	This material, or a component of the material, can be absorbed through the skin with resultant toxic effects. If skin or hair contact occurs, immediately remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre or a Doctor; or for 15 minutes and transport to Doctor or Hospital. For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering, or irritation occurs seek medical assistance.
<b>EYE CONTACT</b>	Immediately irrigate with copious quantities of water for 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre.
<b>INGESTION</b>	Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Immediately call Poisons Centre or Doctor. Transport to a doctor or hospital quickly.
<b>PPE FOR FIRST AIDERS</b>	Wear safety shoes, gloves, safety glasses. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.
<b>NOTES TO PHYSICIAN</b>	Treat symptomatically. Can cause corneal burns.

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### 5. FIRE FIGHTING MEASURES

<b>HAZCHEM CODE</b>	2X
<b>SUITABLE EXTINGUISHING MEDIA</b>	If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).
<b>SPECIFIC HAZARDS</b>	Non-combustible material.
<b>FIRE FIGHTING FURTHER ADVICE</b>	Not applicable.

### 6. ACCIDENTAL RELEASE MEASURES

<b>SMALL SPILLS</b>	Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.
<b>LARGE SPILLS</b>	Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
<b>DANGEROUS GOODS - INITIAL EMERGENCY RESPONSE GUIDE NO:</b>	37

### 7. HANDLING AND STORAGE

<b>HANDLING</b>	Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols.
<b>STORAGE</b>	<p>Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Store locked up. Keep container standing upright. Keep containers closed when not in use - check regularly for leaks.</p> <p>This material is classified as a Class 8 Corrosive, Division 6.1 Toxic Substance as per the criteria of the "Australian Code for the Transport of Dangerous Goods by Road &amp; Rail" and/or the "New Zealand NZS5433: Transport of Dangerous Goods on Land" and must be stored in accordance with the relevant regulations.</p> <p>This material is a Scheduled Poison Schedule 5 (Caution) and must be stored, maintained and used in accordance with the relevant regulations.</p>

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### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

NATIONAL OCCUPATIONAL EXPOSURE LIMITS	TWA		STEL		NOTICES
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	
Cresol, all isomers	5	22	-	-	Sk
<p>As published by Safe Work Australia.</p> <p>TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.</p> <p>STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.</p> <p>'Sk' Notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.</p> <p>These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.</p> <p>If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.</p>					
BIOLOGICAL LIMIT VALUES	As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.				
ENGINEERING MEASURES	Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Use with local exhaust ventilation or while wearing appropriate respirator. Vapour heavier than air - prevent concentration in hollows or sumps. Do NOT enter confined spaces where vapour may have collected.				
PERSONAL PROTECTION EQUIPMENT	<p>SAFETY SHOES, GLOVES, SAFETY GLASSES.</p> <p>Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.</p> <p>Wear safety shoes, gloves, safety glasses. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.</p>				
HYGIENE MEASURES	Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and skin contact. Avoid inhalation of dust. Ensure that eyewash stations and safety showers are close to the workstation location.				

## Safety Data Sheet

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Colour:	Clear
Solubility:	Soluble in water
Specific Gravity (20 °C):	0.98-1.02 @ 25 Deg C
Relative Vapour Density (air=1):	8.2
Vapour Pressure (20 °C):	<0.01 Pa
Flash Point (°C):	173 Deg C
Flammability Limits (%):	0.5 - 2.8
Autoignition Temperature (°C):	275 Deg C
Boiling Point/Range (°C):	216 Deg C
Decomposition Point (°C):	>200 Deg C
pH:	9.0-10.5
Total VOC (g/Litre):	Nil
% Volatile by Volume:	Nil

(Typical values only - consult specification sheet) N Av = Not available, N App = Not applicable.

### 10. STABILITY AND REACTIVITY

<b>CHEMICAL STABILITY</b>	This material is thermally stable when stored and used as directed.
<b>CONDITIONS TO AVOID</b>	Elevated temperatures and sources of ignition.
<b>INCOMPATIBLE MATERIALS</b>	Oxidising agents.
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	Oxides of carbon and nitrogen, smoke and other toxic fumes.
<b>HAZARDOUS REACTIONS</b>	No known hazardous reactions.

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### 11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

<b>ACUTE EFFECTS</b>	<p><b>Inhalation</b> Fatal if inhaled. Material may be an irritant to mucous membranes and respiratory tract.</p> <p><b>Skin contact</b> Toxic in contact with skin. Can be absorbed through the skin with resultant toxic effects. Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.</p> <p><b>Ingestion</b> Toxic if swallowed. Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.</p> <p><b>Eye contact</b> A severe eye irritant. Corrosive to eyes: contact can cause corneal burns. Contamination of eyes can result in permanent injury.</p>
<b>ACUTE TOXICITY</b>	<p><b>Inhalation</b> This material has been classified as a Category 2 Hazard. Acute toxicity estimate (based on ingredients): <math>0.5 &lt; LC_{50} \leq 2.0</math> mg/L for vapours or <math>0.05 &lt; LC_{50} \leq 0.5</math> mg/L for dust and mist</p> <p><b>Skin contact</b> This material has been classified as a Category 3 Hazard. Acute toxicity estimate (based on ingredients): 200 - 1,000 mg/Kg bw.</p> <p><b>Ingestion</b> This material has been classified as a Category 3 Hazard. Acute toxicity estimate (based on ingredients): 50 - 300 mg/Kg bw.</p> <p><b>Corrosion/Irritancy</b> Eye: this material has been classified as a Category 1 Hazard (irreversible effects to eyes). Skin: this material has been classified as a Category 1A Hazard (irreversible effects to skin).</p> <p><b>Sensitisation</b> Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.</p> <p><b>Aspiration hazard</b> This material has been classified as non-hazardous.</p> <p><b>Specific target organ toxicity (single exposure)</b> This material has been classified as non-hazardous.</p>
<b>CHRONIC TOXICITY</b>	<p><b>Mutagenicity</b> This material has been classified as non-hazardous.</p> <p><b>Carcinogenicity</b> This material has been classified as non-hazardous.</p> <p><b>Reproductive toxicity (including via lactation)</b> This material has been classified as non-hazardous.</p> <p><b>Specific target organ toxicity (repeat exposure)</b> This material has been classified as non-hazardous.</p>

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### 12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

<b>ACUTE AQUATIC HAZARD</b>	This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >100 mg/L.
<b>LONG-TERM AQUATIC HAZARD</b>	This material has been classified as a Category Chronic 2 Hazard. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): 1 - 10 mg/L, where the substance is not rapidly degradable and/or $BCF \geq 500$ and/or $\log K_{ow} \geq 4$ .
<b>ECOTOXICITY</b>	No information available.
<b>PERSISTENCE AND DEGRADABILITY</b>	No information available.
<b>BIOACCUMULATIVE POTENTIAL</b>	No information available.
<b>MOBILITY</b>	No information available.

### 13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.



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## 14. TRANSPORT INFORMATION

ROAD AND RAIL  
TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".



UN No:	2922
Dangerous Goods Class:	8
Subsidiary Risk, Secondary Subsidiary:	6.1
Packing Group:	II
Special Provisions:	274
Limited Quantities:	1 L
Hazchem Code:	2X
Emergency Response Guide No:	37
<b>Packagings and IBCs</b>	
Packing Instructions	P001, IBC02
Special Packing Provisions	
<b>Portable Tanks and Bulk Containers</b>	
Instructions	T7
Special Provisions	TP2
Proper Shipping Name:	CORROSIVE LIQUID, TOXIC, N.O.S. (Cyclohexanamine, 4,4'-methylenebis[2-methyl- and Cresylic acid)
Segregation Dangerous Goods:	Not to be loaded with explosives (Class 1), dangerous when wet substances (Class 4.3), oxidising agents (Class 5.1), organic peroxides (Class 5.2), radioactive substances (Class 7) or food and food packaging in any quantity. Note 1: Concentrated strong alkalis are incompatible with concentrated strong acids. Note 2: Concentrated strong acids are incompatible with concentrated strong alkalis. Note 3: Acids are incompatible with Dangerous Goods of Class 6 which are cyanides. Exemptions may apply.

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## MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea. This material is classified as a Marine Pollutant (P) according to the International Maritime Dangerous Goods Code.



UN No:	2922
Dangerous Goods Class:	8
Subsidiary Risk, Secondary Subsidiary:	6.1
Packing Group:	II
Special Provisions:	274
Limited Quantities:	1 L
Hazchem Code:	2X
Emergency Response Guide No:	37
EMS fire:	F-A
EMS spill:	S-B
<b>Packagings and IBCs</b>	
Packing Instructions:	P001, IBC02
Special Packing Provisions:	
<b>Portable Tanks and Bulk Containers</b>	
Instructions:	T7
Special Provisions:	TP2
Proper Shipping Name:	CORROSIVE LIQUID, TOXIC, N.O.S. (Cyclohexanamine, 4,4'-methylenebis[2-methyl- and Cresylic acid])

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### AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.



UN No:	2922
Dangerous Goods Class:	8
Subsidiary Risk, Secondary Subsidiary:	6.1
Packing Group:	II
Special Provisions:	A3, A803
ERG Code:	8P
<b>Passengers and Cargo Aircraft Limited Quantities</b>	
Packing Instructions:	Y840
Maximum Net Quantity per Package:	0.5 L
<b>Passengers and Cargo Aircraft</b>	
Packing Instructions:	851
Maximum Net Quantity per Package:	1 L
<b>Cargo Aircraft Only</b>	
Packing Instructions:	855
Maximum Net Quantity per Package:	30 L
Proper Shipping Name:	CORROSIVE LIQUID, TOXIC, N.O.S. (Cyclohexanamine, 4,4'-methylenebis[2-methyl- and Cresylic acid])

## 15. REGULATORY INFORMATION

### This material is not subject to the following international agreements:

Montreal Protocol (Ozone depleting substances)  
 The Stockholm Convention (Persistent Organic Pollutants)  
 The Rotterdam Convention (Prior Informed Consent)  
 International Convention for the Prevention of Pollution from Ships (MARPOL)

### This material is subject to the following international agreements:


Basel Convention (Hazardous Waste)

- Wastes from production, formulation and use of resins, latex, plasticizers, glues/adhesives

### This material/constituent(s) is covered by the following requirements:

- The Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) established under the Therapeutic Goods Act (Commonwealth).
- All components of this product are listed on or exempt from the Australian Inventory of Chemical Substances (AICS).

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 VIVACITY ENGINEERING PTY LTD | ABN: 78 305 545 664

## Safety Data Sheet

### 16. OTHER INFORMATION

Reason for issue: Revised

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.