



EpiMax MATERIAL SAFETY DATA SHEET

Product Name **EPIMAX 421HAR COMPOUND**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name EPIMAX TECHNOLOGIES PTY LTD
Address 4/3 Moorebank Avenue, Moorebank, NSW, AUSTRALIA, 2170
Telephone 1300 721 522
Fax (02) 9904 3207
Emergency 1300 721 522
Synonym(s) 421HAR COMPOUND • 4042120 - PRODUCT CODE • EPOXIDE RESIN AND XYLENE
Use(s) TWO PART EPOXY RESIN COMPOSITION. USE WITH EPIMAX 421HAR HARDENER.
SDS Date 08/01/16

2. HAZARDS IDENTIFICATION

RISK PHRASES

R10 Flammable
R20/21 Harmful by inhalation and in skin contact
R36/37/38 Irritating to eyes, respiratory system and skin
R43 May cause sensitisation by skin contact
R48/20 Danger of serious damage to health through prolonged inhalation of sanding dust.

SAFETY PHRASES

S16 Keep away from sources of ignition- No smoking
S23 Do not breathe vapour dust when sanding
S24/25 Avoid contact with skin and eyes
S29 Do not empty into drains
S36/37/39 Wear suitable protective clothing, gloves and eye face protection
S38 If insufficient ventilation, use respiratory equipment

UN No.	1263	DG CLASS	3	Subsidiary Risk(s)	None Allocated
Packing Group	III	Hazchem Code	3[Y]		

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS NO.	Content
EXPOXY NOVOLAC RESIN	NOT AVAILABLE	028064-14-4	30% - 60%
INERT FILLER	NOT AVAILABLE	014808-60-7	30% - 60%
XYLENE	C6H4C2H6	001330-20-7	< 10%
NON HAZARDOUS INGREDIENTS OR THOSE BELOW CUT OFF LIMITS			TO 100%

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4. FIRST AID MEASURES

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. To protect rescuer, use a Type A (Organic vapour) respirator or an Airline respirator (in poorly ventilated areas). Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.
Special Treatment	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Special Hazards	Flammable. May evolve toxic gases (carbon oxides, phenols, hydrocarbons) when heated to decomposition. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, pilot lights, mobile phones etc. when handling. Earth containers when dispensing fluids.
Advice for firefighters	Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.
Extinguishing Media	Dry agent, carbon dioxide or water fog. Prevent contamination of drains or waterways
Hazchem Code	3[Y]

6. ACCIDENTAL RELEASE MEASURES

Spillage	Contact emergency services where appropriate. Use personal protective equipment. Clear area of all unprotected personnel. Ventilate area where possible. Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Eliminate all ignition sources.
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7. STORAGE AND HANDLING

Storage	Store tightly sealed in a cool, dry, well ventilated area, removed from oxidising agents, acids, alkalis, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should be banded and have appropriate fire protection and ventilation systems.
Precautions for safe handling	Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTIONS

Exposure Stds

Ingredient	Reference	TWA		STEL	
XYLENE	SWA (AUS)	80ppm	350mg/m ³	150ppm	655mg/m ³

Biological Limits No biological limit allocated.

Engineering Controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Flammable/explosive vapours may accumulate in poorly ventilated areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standard.

PPE Wear splash-proof goggles, nitrile or viton (R) gloves, coveralls and a Type A (Organic vapour) respirator. If sanding dry product, wear: a Class P1 (Particulate) respirator. If spraying, with prolonged use, or if in confined areas, wear: impervious coveralls and an Air-line respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	VARIOUS COLOURED LIQUID	Solubility (water)	INSOLUBLE
Odour	NOT AVAILABLE	Specific Gravity	1.70
pH	NOT AVAILABLE	% Volatiles	10%
Vapour Pressure	NOT AVAILABLE	Flammability	FLAMMABLE
Vapour Density	NOT AVAILABLE	Flash Point	52°C
Boiling Point	NOT DETERMINED	Upper Explosion Limit	NOT AVAILABLE
Melting Point	NOT AVAILABLE	Lower Explosion Limit	NOT AVAILABLE
Evaporation Rate	NOT AVAILABLE	Decomposition Temperature	NOT AVAILABLE
Autoignition Rate	NOT AVAILABLE	Viscosity	NOT AVAILABLE
Partition Coefficient	NOT AVAILABLE		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended conditions of storage.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources.
Material to avoid	Incompatible with oxidising agents (eg. hypochlorites), acids (eg. nitric acid), alkalis (eg. hydroxides), heat and ignition sources.
Hazardous Decomposition Products	May evolve toxic gases (carbon oxides, phenols, hydrocarbons) when heated to decomposition.
Hazardous Reactions	Hazardous polymerization is not expected to occur.

11. TOXICOLOGICAL INFORMATION

Health hazard summary Irritant - low to moderate toxicity. This product has the potential to cause adverse health effects with over exposure. Use safe work practices to avoid eye or skin contact and inhalation. May cause sensitisation by skin contact. The cured product is considered non toxic.

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Eye	Irritant. Contact may result in irritation, lacrimation, pain, redness and conjunctivitis. May result in burns with prolonged contact.
Inhalation	Over exposure may result in irritation of the nose and throat, with coughing. High level exposure may result in dizziness, drowsiness, breathing difficulties, pulmonary oedema and unconsciousness. May cause sensitisation by inhalation.
Skin	Irritant. Contact may result in irritation, redness, rash and dermatitis. May cause sensitisation by skin contact.
Ingestion	Moderate toxicity. Ingestion may result in nausea, vomiting, abdominal pain, diarrhoea, fatigue, dizziness and unconsciousness.
Toxicity Data	There is no toxicological information available for this product.

12. ECOLOGICAL INFORMATION

Other adverse effects Limited ecotoxicity data was available for this product at the time this report was prepared. Ensure appropriate measures are taken to prevent this product from entering the environment.

13. DISPOSAL CONSIDERATIONS

Waste disposal Mix parts A + B together (small amounts), absorb with sand, vermiculite or similar and dispose of to an approved landfill site. Ensure protective equipment is worn when mixing. Do not seal containers/tins until reaction is complete. Contact the manufacturer for additional information. Prevent contamination of drains or waterways as environmental damage may result.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION



CLASSIFIED AS A DANGEROUS GOOD THE CRITERIA OF THE ADG CODE

Shipping Name	FLAMMABLE LIQUID N.O.S				
UN No.	1263	DG CLASS	3	Subsidiary Risk(s)	NONE ALLOCATED
Packing Group	III	Hazchem Code	3[Y]		

IATA

Shipping Name	FLAMMABLE LIQUID N.O.S				
UN No.	1263	DG CLASS	3	Subsidiary Risk(s)	NONE ALLOCATED
Packing Group	III	Hazchem Code	3[Y]		

IMDG

Shipping Name	FLAMMABLE LIQUID N.O.S				
UN No.	1263	DG CLASS	3	Subsidiary Risk(s)	NONE ALLOCATED
Packing Group	III	Hazchem Code	3[Y]		

Product Name **EPIMAX 421HAR COMPOUND**

15. REGULATORY INFORMATION

Poison Schedule Classified as a Schedule 5 (S5) Poison using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

AICS All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Additional information This product is used in conjunction with EpiMax 421HAR Hardener.

WELDING - SANDING - CUTTING DRIED OR CURED PRODUCT: If sanding, cutting or welding dried or cured product, adverse health effects may be avoided by the use of appropriate engineering controls and/or personal protective equipment. If welding, wear a Class P2 (Metal fume) respirator and depending on the nature of the surface being welded, additional protection (eg. for organic vapours/acid gas) may also be required. A Class P1(Particulate) respirator is recommended if dust is generated.

EPOXY - PHENOXY RESINS AND POLYURETHANES: Where spray painting with two or more component epoxy resins or polyurethane paints is undertaken, an employee shall wear a air-line respirator, full length chemically resistant coveralls and gloves. Further, if an individual is to enter an enclosed booth where a vapour or gas curing process is occurring, an air-line respirator is required. Once cured, these resins are considered non toxic.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

ABBREVIATIONS:

ACGIH - American Conference of Industrial Hygienists.

ADG - Australian Dangerous Goods.

BEI - Biological Exposure Indice(s).

CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.

CNS - Central Nervous System.

EC No - European Community Number.

HSNO - Hazardous Substances and New Organisms.

IARC - International Agency for Research on Cancer.

mg/m³ - Milligrams per Cubic Metre.

NOS - Not Otherwise Specified.

pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).

PPM - Parts Per Million.

RTECS - Registry of Toxic Effects of Chemical Substances.

STEL - Short Term Exposure Limit.

SWA - Safe Work Australia.

TWA - Time Weighted Average.



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Product Name **EPIMAX 421HAR HARDENER**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name EPIMAX TECHNOLOGIES PTY LTD
Address 4/3 Moorebank Avenue, Moorebank, NSW, AUSTRALIA, 2170
Telephone 1300 721 522
Fax (02) 9904 3207
Emergency 1300 721 522
Synonym(s) 421HAR HARDENER • 5042120 - PRODUCT CODE • FORMULATED POLYAMINE ADDUCT
Use(s) TWO PART EPOXY RESIN COMPOSITION. USE WITH EPIMAX 421HAR COMPOUND
SDS Date 24/02/12

2. HAZARDS IDENTIFICATION

RISK PHRASES

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed
R34 Causes burns
R43 May cause sensitisation by skin contact

SAFETY PHRASES

S24/25 Avoid contact with skin and eyes
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S36/37/39 Wear suitable protective clothing, gloves and eye face protection
S38 In case of insufficient ventilation, wear suitable respiratory equipment.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

UN No.	2735	DG CLASS	8	Subsidiary Risk(s)	None Allocated
Packing Group	III	Hazchem Code	2X		

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS NO.	Content
ISOPHORONE DIAMINE	NOT AVAILABLE	002855-13-2	30% - 60%
M-XYLENE DIAMINE	NOT AVAILABLE	004177-55-0	10% - <30%
BENZYL ALCOHOL	C6H5CH2OH	000100-51-6	30% - 60%
NON-HAZARDOUS INGREDIENTS OR THOSE BELOW CUT OFF LIMITS			TO 100%

Product Name: **EPIMAX 421HAR HARDENER**

4. FIRST AID MEASURES

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. To protect rescuer, use a Type A (Organic vapour) respirator or an Airline respirator (in poorly ventilated areas). Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.
Special Treatment	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Special Hazards	Combustible. May evolve toxic gases (carbon oxides, phenols, hydrocarbons) when heated to decomposition. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, pilot lights, mobile phones etc. when handling. Earth containers when dispensing fluids.
Advice for firefighters	Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.
Extinguishing Media	Dry agent, carbon dioxide or water fog. Prevent contamination of drains or waterways
Hazchem Code	2X

6. ACCIDENTAL RELEASE MEASURES

Spillage	Contact emergency services where appropriate. Use personal protective equipment. Clear area of all unprotected personnel. Ventilate area where possible. Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Eliminate all ignition sources.
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7. STORAGE AND HANDLING

Storage	Store tightly sealed in a cool, dry, well ventilated area, removed from oxidising agents, acids, alkalis, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should be bunded and have appropriate fire protection and ventilation systems.
Precautions for safe handling	Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

Product Name: **EPIMAX 421HAR HARDENER**

8. EXPOSURE CONTROLS / PERSONAL PROTECTIONS

Exposure Stds None allocated

Biological Limits No biological limit allocated.

Engineering Controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Flammable/explosive vapours may accumulate in poorly ventilated areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standard.

PPE Wear splash-proof goggles, nitrile or viton (R) gloves, coveralls and a Type A (Organic vapour) respirator. If sanding dry product, wear: a Class P1 (Particulate) respirator. If spraying, with prolonged use, or if in confined areas, wear: impervious coveralls and an Air-line respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	CLEAR LIQUID	Solubility (water)	INSOLUBLE
Odour	SLIGHTLY AMMONIACAL	Specific Gravity	1.03.107
pH	NOT AVAILABLE	% Volatiles	<1%
Vapour Pressure	NOT AVAILABLE	Flammability	NOT AVAILABLE
Vapour Density	NOT AVAILABLE	Flash Point	100°C
Boiling Point	NOT AVAILABLE	Upper Explosion Limit	NOT AVAILABLE
Melting Point	NOT AVAILABLE	Lower Explosion Limit	NOT AVAILABLE
Evaporation Rate	NOT AVAILABLE		
Autoignition Rate	NOT AVAILABLE	Decomposition Temperature	NOT AVAILABLE
Partition Coefficient	NOT AVAILABLE	Viscosity	NOT AVAILABLE

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended conditions of storage.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources.
Material to avoid	Incompatible with oxidising agents (eg. hypochlorites), acids (eg. nitric acid), alkalis (eg. hydroxides), heat and ignition sources.
Hazardous Decomposition Products	May evolve toxic gases (carbon oxides, phenols, hydrocarbons) when heated to decomposition.
Hazardous Reactions	Hazardous polymerization is not expected to occur.

11. TOXICOLOGICAL INFORMATION

Health hazard summary Corrosive. This product has the potential to cause adverse health effects. Use safe work practices to avoid eye or skin contact and inhalation. Potential sensitising agent. Individuals with pre-existing respiratory impairment (eg asthmatics) or skin sensitivities may be more susceptible to adverse health effects.

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Eye Corrosive - irritant. Contact may result in irritation, lacrimation, pain, redness, corneal burns and possible permanent damage.

Inhalation Corrosive. Over exposure may result in irritation of the nose and throat, coughing, burning sensation, nausea and dizziness. May cause sensitisation by inhalation. High level exposure may result in breathing difficulties, ulceration, pulmonary oedema and unconsciousness.

Skin Corrosive. Will cause severe irritation and burns. Contact may result in irritation, redness, pain, rash, dermatitis and possible burns. May cause sensitisation by skin contact.

Ingestion Corrosive. Ingestion may result in burns to the mouth and throat, nausea, vomiting, ulceration of the gastrointestinal tract, breathing difficulties, circulatory collapse and coma.

Toxicity Data There is no toxicological information available for this product.

12. ECOLOGICAL INFORMATION

Other adverse effects Limited ecotoxicity data was available for this product at the time this report was prepared. Ensure appropriate measures are taken to prevent this product from entering the environment.

13. DISPOSAL CONSIDERATIONS

Waste disposal Mix parts A + B together (small amounts), absorb with sand, vermiculite or similar and dispose of to an approved landfill site. Ensure protective equipment is worn when mixing. Do not seal containers/tins until reaction is complete. Contact the manufacturer for additional information. Prevent contamination of drains or waterways as environmental damage may result.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION**CLASSIFIED AS A DANGEROUS GOOD THE CRITERIA OF THE ADG CODE**

Shipping Name	CORROSIVE LIQUID N.O.S				
UN No.	2735	DG CLASS	8	Subsidiary Risk(s)	NONE ALLOCATED
Packing Group	III	Hazchem Code	2X	GTEPG	NONE ALLOCATED

IATA

Shipping Name	CORROSIVE LIQUID N.O.S				
UN No.	2735	DG CLASS	8	Subsidiary Risk(s)	NONE ALLOCATED
Packing Group	III	Hazchem Code	2X		

IMDG

Shipping Name	CORROSIVE LIQUID N.O.S				
UN No.	2735	DG CLASS	8	Subsidiary Risk(s)	NONE ALLOCATED
Packing Group	III	Hazchem Code	2X		

Product Name: **EPIMAX 421HAR HARDENER**

15. REGULATORY INFORMATION

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16. OTHER INFORMATION

Additional information This product is used in conjunction with EpiMax 421HAR Compound.

WELDING - SANDING - CUTTING DRIED OR CURED PRODUCT: If sanding, cutting or welding dried or cured product, adverse health effects may be avoided by the use of appropriate engineering controls and/or personal protective equipment. If welding, wear a Class P2 (Metal fume) respirator and depending on the nature of the surface being welded, additional protection (eg. for organic vapours/acid gas) may also be required. A Class P1 (Particulate) respirator is recommended if dust is generated.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

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mg/m³ - Milligrams per Cubic Metre.

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pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).

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