



**SAFETY DATA SHEET
QUICSEAL 612HB – PART A
TILE-POXY HB**

1. INFORMATION OF THE SUBSTANCE/COMPOUND AND THE SUPPLIER

Product Name: QUICSEAL 612HB – Tile-poxy HB (Part A)
Product Use: Part A of a three-component epoxy resin adhesive

Details of the supplier:

*QUICSEAL CONSTRUCTION CHEMICALS PTE LTD
No. 7 Eunos Avenue 8A
Eunos Industrial Estate
Singapore 409460*

Emergency Contact No.: (65) 6742 4466

2. HAZARDS IDENTIFICATION

GHS Classification:

Skin irritant – Category 2
Serious eye damage – Category 2
Skin sensitizer – Category 1
Chronic aquatic toxicant – Category 2

GHS Label Elements

Pictograms:



Signal Word

Danger

Hazard Statements:

Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
Toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention

Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and forearms thoroughly after handling.
Avoid breathing fume/mist/vapours/spray.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.

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Website: www.quicseal.com Co.Reg. No.: 198201286W



Response

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

If eye irritation persists: Get medical advice/attention.

Do NOT induce vomiting.

Collect spillage.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

This product contains the following components classified as hazardous:

COMPONENTS	CAS No.	EINECS No.	Index No.	Percentage
Bisphenol A epoxy resin	25068-38-6	500-033-5	603-074-00-8	75 – 95%
C12-C14 aliphatic diglycidyl ether	68609-97-2	271-846-8	603-103-00-4	5 – 25%

4. FIRST-AID MEASURES**General information**

Take person to a safe place. Observe self-protection for first aid. Always seek medical advice in the event of contact with this substance.

Inhalation

Keep the patient calm. If unconscious place in stable sideways position. Protect against loss of body heat. If breathing stops, administer artificial respiration. Seek medical advice immediately and clearly identify substance.

Skin contact

Remove contaminated clothes at once. Wash off with plenty of water or water and soap immediately for 10-15 minutes. In serious cases, use emergency shower immediately. Seek medical advice immediately and clearly identify substance.

Eye contact

Rinse immediately with plenty of water for 10-15 minutes. Keep eyelids well open to rinse the whole eye surface and eyelids with water. Seek medical advice immediately and clearly identify substance. Continue to bathe eyes during transport to medical practitioner.

Ingestion

If conscious, give several small portions of water to drink. Do not induce vomiting. Seek medical advice immediately and clearly identify substance.

Notes to physician

Treat patient symptomatically (decontamination, vital functions).

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5. FIRE-FIGHTING MEASURES

General Fire Hazards

The product is non-flammable (water-borne system). If material is involved in fire, do not breathe fumes.

Suitable Fire-extinguishing Media

Use the appropriate fire extinguishing media for surrounding fire (water, foam, dry powder, CO₂)

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

Advice for fire-fighters

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Do not use a solid water stream as it may scatter and spread fire.

Further information

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES

Emergency Measures

Emergency and non-emergency responders should use personal protective equipment. Avoid contact with skin and eyes. Do not breathe vapours/aerosol.

Personal Precautions and Protective equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material.

Methods and materials for containment and cleaning up

Carefully contain and stop the source of the spill, if safe to do so.

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Keep in suitable and closed containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Plan first aid action before beginning work with this product. Wear personal protective equipment. Avoid contact with skin and eyes.

Conditions for safe storage, including any incompatibilities

Keep out of reach of children. Store in a place accessible by authorized persons only. Store in original container. Keep tightly closed in a dry and cool place. Shelf life up to 2 years from date of manufacture.

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8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control Parameters / Occupational Exposure Limits

For component: C12-C14 aliphatic diglycidyl ether, CAS No.: 68609-97-2
Singapore Permissible Exposure Level (PEL), long term: 0.1 ppm / 0.54 mg/m³

Occupational Exposure Controls

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

Personal Protective Equipment:

Hand Protection

Protective gloves complying with EN 374. Gloves made of Nitril.
Break through time: > 4 h.

Eye Protection

Safety glasses with side-shields conforming to EN 166. Eye wash bottle with pure water.

Skin / Body Protection

Long sleeved clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory Protection

No personal respiratory protective equipment normally required. Breathing apparatus needed only when aerosol or mist is formed. Respirator with A/P2 filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Clear
Odour:	Slight
Flash Point:	> 150°C
Initial boiling point and boiling range:	Not available
Freezing / Melting point:	Not available
Autoignition temperature:	Not available
Flammability Limits:	Not available
Vapor pressure (20°C):	Not available
Vapor density:	Not available
Water Solubility (25°C):	Not soluble
Specific Gravity:	1.16 ~ 1.18

10. STABILITY AND REACTIVITY

Chemical stability

Stable at normal conditions. No decomposition if stored and applied as directed.

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Possibility of hazardous reactions

No hazardous reactions are expected under normal conditions of handling and storage. Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Conditions to avoid

Avoid temperatures above 60°C, direct sunlight and contact with sources of heat. Burning produces obnoxious and toxic fumes.

Incompatible materials

Oxidising agents, strongly alkaline and strongly acid materials.

Hazardous decomposition products

None under normal use. Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke) may be liberated when product is involved in fire.

11. TOXICOLOGICAL INFORMATION

This product has not been tested and all the toxicological statements have been derived from the respective components' available toxicity information.

Acute toxicity

Experimental/calculated data:

LD50, oral: > 5,000 mg/kg (the product is not classified as orally toxic)

LD50, dermal: > 5,000 mg/kg (the product is not classified as dermally toxic)

LC50, inhalation: > 20 mg/L (the product is classified as non-toxic if inhaled)

Skin and Eye Irritation

The product contains the following components with their respective skin and eye corrosion/irritation classification:

COMPONENTS	CAS No.	Animal skin test result	Animal eye test result
Bisphenol A epoxy resin	25068-38-6	Moderate Irritant (Skin Irritant Category 2)	Moderate Irritant (Skin Irritant Category 2)
C12-C14 aliphatic diglycidyl ether	68609-97-2	Moderate Irritant (Skin Irritant Category 2)	Moderate Irritant (Skin Irritant Category 2)

Respiratory / Skin sensitization

The product's components may cause an allergic skin reaction. This product is not expected to cause allergy or asthma symptoms or breathing difficulties if accidentally inhaled.

Germ cell mutagenicity / Carcinogenicity / Reproductive toxicity / Developmental toxicity

Based on the assessment of available information, the product is: not mutagenic in bacteria; has no known carcinogenic effect; and not expected to cause reproductive and developmental toxicity.

Specific target organ toxicity (single and repeated exposure)

Based on the available information, there is no specific target organ toxicity expected after a single or repeated exposure to the product.

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12. ECOLOGICAL INFORMATION

The following ecological assessment is based on the available ecotoxicity information of the product's components.

Chronic toxicity to the aquatic environment

The product's major components are classified as Category 2 chronic aquatic toxicants. By estimation this product is considered toxic to aquatic life with long lasting effects (Chronic toxicity to the aquatic environment Category 2)

13. DISPOSAL CONSIDERATIONS

Description of waste residues and information on their safe handling & methods of disposal

Dispose of the product through licensed hazardous waste collectors under Singapore regulations. Provide the hazardous waste collector the sufficient information on the various hazards of this product.

Disposal of any contaminated packaging

Dried material can be disposed off in authorized landfill site in accordance to national regulations. Container should be recycled after cleaning or dispose of the container through licensed hazardous waste collectors under Singapore regulations. Provide the hazardous waste collector the sufficient information on the various hazards of this product in this container.

14. TRANSPORT INFORMATION

Land Transport (ADR):

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MIXTURE (Epoxy resin)

UN Number: 3082
Hazard Class: 9
Packing Group: III

Air Transport (IATA):

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MIXTURE (Epoxy resin)

UN Number: 3082
Hazard Class: 9
Packing Group: III
Packing instructions: Passenger aircraft: 964 (450 L)
LQ: Y964 (30 kg G)
Cargo aircraft: 964 (450 L)

Sea transport (IMDG):

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MIXTURE (Epoxy resin)

UN Number: 3082
Hazard Class: 9
Packing Group: III
EmS Number: F-A S-F
Marine pollutant: Yes

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15. REGULATORY INFORMATION

Applicable National Regulations

This product is subject to the requirements in the following acts/regulations:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations
Environmental Protection and Management Act and Environmental Protection and Management
Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives)

International Regulations

This product is classified as hazardous pursuant to the provision set forth in Directives 67/548/EEC and 1999/45/EC and/or EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.

16. OTHER INFORMATION

The information and data contained herein are believed to be accurate and reliable; however, it is the user's responsibility to determine suitability of use. Since QUICSEAL Construction Chemicals Pte. Ltd. cannot know all of the uses to which its products may be put or the conditions of use; it makes no warranties concerning the fitness or suitability of its products for a particular use of purpose.

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**SAFETY DATA SHEET
QUICSEAL 612HB – PART B
TILE-POXY HB**

1. INFORMATION OF THE SUBSTANCE/COMPOUND AND THE SUPPLIER

Product Name: QUICSEAL 612HB – Tile-poxy HB (Part B)
Product Use: Part B of a three-component epoxy resin adhesive

Details of the supplier:

*QUICSEAL CONSTRUCTION CHEMICALS PTE LTD
No. 7 Eunos Avenue 8A
Eunos Industrial Estate
Singapore 409460*

Emergency Contact No.: (65) 6742 4466

2. HAZARDS IDENTIFICATION

GHS Classification:

Metal corrosive – Category 1
Acute dermal toxicant – Category 4
Skin corrosive – Category 1
Serious eye damage – Category 1
Skin sensitizer – Category 1
Chronic aquatic toxicant – Category 3

GHS LABEL ELEMENTS

Symbol(s):



Signal Word

Danger

Hazard Statements:

May be corrosive to metals
Harmful in contact with skin
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Harmful to aquatic life with long lasting effects.

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Precautionary Statements:Prevention

Keep only in original container.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Avoid breathing fume/mist/vapours/spray.
 Wash hands and forearms thoroughly after handling.
 Contaminated work clothing should not be allowed out of the workplace.
 Avoid release to the environment.

Response

Absorb spillage to prevent material damage.
 IF SWALLOWED: Rinse mouth, Do NOT induce vomiting.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 Take off contaminated clothing and wash before reuse.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 Immediately call a poison center or a doctor/physician.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
 If skin irritation or rash occurs: Get medical advice/attention.

Storage

Store in a corrosive resistant container with a resistant inner liner.
 Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

This product contains the following components classified as hazardous:

COMPONENTS	CAS No.	EINECS No.	Index No.	Percentage
Triethylenetetramine	112-24-3	203-950-6	612-059-00-5	75 – 95%
Tris-2.4.6-(Dimethylaminomethyl)phenol	90-72-2	--	--	5 – 25%

4. FIRST-AID MEASURES**General information**

Take person to a safe place. Observe self-protection for first aid. Always seek medical advice in the event of contact with this substance.

Inhalation

Keep the patient calm. If unconscious place in stable sideways position. Protect against loss of body heat. If breathing stops, administer artificial respiration. Seek medical advice immediately and clearly identify substance.

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Skin contact

Remove contaminated clothes at once. Wash off with plenty of water or water and soap immediately for 10-15 minutes. In serious cases, use emergency shower immediately. Seek medical advice immediately and clearly identify substance.

Eye contact

Rinse immediately with plenty of water for 10-15 minutes. Remove any contact lenses and keep eyelids well open to rinse the whole eye surface and eyelids with water. Seek medical advice immediately and clearly identify substance. Continue to bathe eyes during transport to medical practitioner.

Ingestion

If conscious, give several small portions of water to drink. Induce vomiting. Call a physician or poison control immediately. NEVER give anything by mouth to an unconscious person. NEVER induce vomiting in an unconscious person.

Notes to physician

Treat patient symptomatically (decontamination, vital functions).

5. FIRE-FIGHTING MEASURES**Fire-fighting Procedures / Advice for fire-fighters**

Evacuate area immediately. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Deluge with large quantities of water as quickly as possible from a protected location. Avoid impact, friction, heat, or flam during fire-fighting.

Suitable Fire-extinguishing Media

Extinguish with alcohol-resistant foam, carbon dioxide, or dry powder.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide, nitrogen, water, hydrogen, nitrogen oxides, methane, aldehydes, carboxylic acids, and hydrogen cyanide.

Further information

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES**Emergency Measures**

Emergency and non-emergency responders should use personal protective equipment. Avoid contact with skin and eyes. Do not breathe vapours/aerosol.

Personal Precautions and Protective equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material.

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Methods and materials for containment and cleaning up

Carefully contain and stop the source of the spill, if safe to do so. Clean up spills immediately using soft natural bristle brush and conductive rubber or conductive plastic shovel. Use caution; material is sensitive to initiation from sources such as heat, flame, shock, friction, or sparks. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable and closed containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE**Precautions for Safe Handling**

Plan first aid action before beginning work with this product. Wear personal protective equipment. Avoid contact with skin and eyes.

Conditions for safe storage, including any incompatibilities

Do not pressurize or expose containers to heat, flame, sparks, static electricity, or other sources of ignition.

Store in a cool, dry place (approximately 20°C).

Store only in approved containers.

Check old products for deterioration regularly.

Avoid storing product near incompatible materials (see Section 10).

Do not store near flammable materials.

Do not keep deteriorated or salvaged product.

Do not store in direct sunlight or exposure to UV radiation.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**Control Parameters / Occupational Exposure Limits**

For component: Tetraethylenepentamine, CAS No.: 112-24-3

ACGIH: TWA = 1 ppm / 4.2 mg/m³

Occupational Exposure Controls

Handle in accordance with good industrial hygiene and safety practice.

Avoid contact with skin, eyes and clothing.

Do NOT smoke in areas where product is stored or used.

Material is shock sensitive. Use care in handling.

Keep away from ignition sources. Friction can cause ignition.

Eyewash fountains and safety showers should be easily accessible.

Prevent build-up of static electric charges.

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal Protective Equipment

Eye protection: Safety glasses

Hand Protection: Impervious gloves

Respiratory Protection: Appropriate respiratory protection is required when exposure to airborne contaminants may exceed acceptable limits. Respirators should be selected and used in accordance with OSHA, Subpart I (29 CFR 1910.134) and manufacturer's recommendations.

Body Protection: Flame retardant clothing. Wear conductive safety shoes.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Viscous Liquid
Color:	Clear amber
Odour:	Slight
Flash Point:	205°C
Initial boiling point and boiling range:	Not available
Autoignition temperature:	Not available
Flammability Limits:	Not available
Vapor pressure (20°C):	Not available
Vapor density:	Not available
Water Solubility (25°C):	Not soluble
Specific Gravity:	0.92 ~ 0.98

10. STABILITY AND REACTIVITY

Product Stability

The product is stable under recommended handling and storage conditions.

Possibility of hazardous reactions

The product strongly reacts with oxidising agents, strongly alkaline and strongly acid materials.

Conditions to avoid

Keep away from heat, flame, sparks, static electricity, or other sources of ignition.

Incompatible materials

Oxidizing agents, alkalis and amines and strong sunlight or ultraviolet light.

Hazardous decomposition products

None under normal use. Carbon monoxide, carbon dioxide, nitrogen, water, hydrogen, nitrogen oxides, methane, aldehydes, carboxylic acids, and hydrogen cyanide. may be liberated when product is involved in fire.

11. TOXICOLOGICAL INFORMATION

This product has not been tested and all the toxicological statements have been derived from the respective components' available toxicity information.

Acute toxicity

Experimental/calculated data:

LD50, oral: 3,700 mg/kg (the product is not classified as orally toxic)

LD50, dermal: 1,100 mg/kg (the product is harmful in contact with skin)

LC50, inhalation: > 20 mg/L (the product is classified as non-toxic if inhaled)

Skin and Eye Irritation

This product causes severe skin corrosion and serious eye damage due to the following components:

Triethylenetetramine, CAS No.: 112-24-3 – Skin Corrosive (Category 1)

Tris-2.4.6-(Dimethylaminomethyl)phenol, CAS No.: 90-72-2 – Skin / Eye Corrosive (Category 1)

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Respiratory / Skin sensitization

The product's components may cause an allergic skin reaction. This product is not expected to cause allergy or asthma symptoms or breathing difficulties if accidentally inhaled.

Germ cell mutagenicity / Carcinogenicity / Reproductive toxicity / Developmental toxicity

Based on the assessment of available information, the product is: not mutagenic in bacteria; has no known carcinogenic effect; and not expected to cause reproductive and developmental toxicity.

Specific target organ toxicity (single and repeated exposure)

Based on the available information, there is no specific target organ toxicity expected after a single or repeated exposure to the product.

12. ECOLOGICAL INFORMATION

The following ecological assessment is based on the available ecotoxicity information of the product's components.

Chronic toxicity to the aquatic environment

The product's major component is classified as Category 3 chronic aquatic toxicant. By estimation this product is considered harmful to aquatic life with long lasting effects (Chronic toxicity to the aquatic environment Category 3)

13. DISPOSAL CONSIDERATIONS**Description of waste residues and information on their safe handling & methods of disposal**

Dispose of the product through licensed hazardous waste collectors under Singapore regulations. Provide the hazardous waste collector the sufficient information on the various hazards of this product.

Disposal of any contaminated packaging

Dried material can be disposed off in authorized landfill site in accordance to national regulations. Container should be recycled after cleaning or dispose of the container through licensed hazardous waste collectors under Singapore regulations. Provide the hazardous waste collector the sufficient information on the various hazards of this product in this container.

14. TRANSPORT INFORMATION**Land Transport (ADR):**

Proper Shipping Name: TRIETHYLENETETRAMINE
UN Number: 2259
Hazard Class: 8
Packing Group: II

Air Transport (IATA):

Proper Shipping Name: TRIETHYLENETETRAMINE
UN Number: 2259
Hazard Class: 8
Packing Group: II

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Sea transport (IMDG):

Proper Shipping Name: TRIETHYLENETETRAMINE

UN Number: 2259

Hazard Class: 8

Packing Group: II

Marine pollutant: No

15. REGULATORY INFORMATION**Applicable National Regulations**

This product is subject to the requirements in the following acts/regulations:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations
Environmental Protection and Management Act and Environmental Protection and Management
Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives)

International Regulations

This product is classified as hazardous pursuant to the provision set forth in Directives 67/548/EEC and 1999/45/EC and/or EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.

16. OTHER INFORMATION

The information and data contained herein are believed to be accurate and reliable; however, it is the user's responsibility to determine suitability of use. Since QUICSEAL Construction Chemicals Pte. Ltd. cannot know all of the uses to which its products may be put or the conditions of use; it makes no warranties concerning the fitness or suitability of its products for a particular use of purpose.

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**SAFETY DATA SHEET
QUICSEAL 612HB – PART C
TILE-POXY HB**

1. INFORMATION OF THE SUBSTANCE/COMPOUND AND THE SUPPLIER

Product Name: QUICSEAL 612HB – Tile-poxy HB (Part C)
Product Use: Part C of a three-component epoxy resin adhesive

Details of the supplier:

*QUICSEAL CONSTRUCTION CHEMICALS PTE LTD
No. 7 Eunos Avenue 8A
Eunos Industrial Estate
Singapore 409460*

Emergency Contact No.: (65) 6742 4466

2. HAZARDS IDENTIFICATION

GHS Classification:

Skin Irritant - Category 2
Eye Irritant - Category 2
Carcinogenic - Category 1A
Specific Target Organ Toxicity Repeat Exposure - Category 1 (lungs)

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

Danger

Hazard Statements

Causes skin irritation
Causes serious eye irritation
May cause cancer
Causes damage to lungs through prolonged or repeated exposure

Precautionary Measures

Prevention

Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Wear protective gloves/protective clothing/eye protection.
Wash hands and forearms thoroughly after handling.

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Response

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/attention.

Take-off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.

If eye irritation persists: Get medical advice/attention.

If exposed or concerned: Get medical advice/attention.

Storage

Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

This product contains the following components classified as hazardous:

COMPONENTS	CAS No.	EINECS No.	Index No.	Percentage
Silica Sand	14808-60-7	--	--	70 - 90%
Calcium Carbonate	471-341	2047-439-9	--	20 - 30%

4. FIRST-AID MEASURES**Eye Contact**

Rinse eyes thoroughly with water for at least 15 minutes, including under lids, to remove all particles. Seek medical attention if eye irritation persists.

Skin Contact

Wash with cool water and a pH neutral soap or a mild skin detergent. Seek medical attention if skin irritation persists.

Inhalation

Move person to fresh air. Seek medical attention for discomfort or if coughing or other symptoms do not subside.

Ingestion

Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention or contact poison control center immediately.

Note to Physician

Pls. see Section 11 for the details on the potential health effects of this product.

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5. FIRE-FIGHTING MEASURES

General Fire Hazards

Avoid breathing dust.

Fire-fighting equipment

This product poses no fire-related hazard. A self-contained breathing apparatus (SCBA) is recommended to limit exposures to combustion products when fighting any fire.

Suitable Fire-extinguishing Media

Use extinguishing media appropriate for surrounding fire.

6. ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up

Place spilled material into a container. Avoid actions that cause the product to become airborne. Avoid inhalation of the powder product and contact with skin. Wear appropriate protective equipment as described in Section 8. Scrape product and place in container. Do not wash product down sewage and drainage systems or into bodies of water (e.g. streams). Dispose dry/solidified product according to national legislation and environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid actions that cause the powder product to become airborne during clean-up such as dry sweeping or using compressed air. Use HEPA vacuum or thoroughly wet with water to clean-up dust. Use PPE described in Section 8 below.

Cutting, crushing or grinding hardened product on concrete or other crystalline silica-bearing materials will release respirable crystalline silica. Use all appropriate measures of dust control or suppression, and Personal Protective Equipment (PPE) described in Section 8 below.

Promptly remove and launder clothing that is dusty with powder product. Thoroughly wash skin after exposure to the product.

Conditions for safe storage, including any incompatibilities

Keep bagged product dry until used. Stack bagged material in a secure manner to prevent falling. Bagged product is heavy and poses risks such as sprains and strains to the back, arms, shoulders and legs during lifting and mixing. Handle with care and use appropriate control measures.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control Parameters / Occupational Exposure Limits

For the product's respirable crystalline silica / quartz component:
Singapore Permissible Exposure Level (PEL), long term: 0.1 mg/m³

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Engineering Controls

Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits.

Personal Protective Equipment (PPE)Respiratory Protection

Wear a NIOSH-approved respirator that is properly fitted and is in good condition when exposed to dust above exposure limits.

Eye Protection

Wear ANSI-approved glasses or safety goggles when handling the dry powder to prevent contact with eyes. Wearing contact lenses when using the product, under dusty conditions, is not recommended.

Skin Protection

Wear gloves, boot covers and protective clothing impervious to water to prevent skin contact. Do not rely on barrier creams, in place of impervious gloves. Remove clothing and protective equipment that becomes saturated with powder product and immediately wash exposed areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Powder
Colour:	Grey or white powder
Flash Point:	Not flammable
Boiling Point:	Not Applicable
Melting Point:	Not Applicable
Oxidising Properties:	Not Applicable
Flammability Limits:	None allocated
Water Solubility:	Slightly soluble in water
Solid Content:	approx. 100%
pH:	approx. 8

10. STABILITY AND REACTIVITY**Stability**

The product is stable in normal conditions of use and storage.

Possibility of hazardous reactions, including any incompatibilities

The product contains a minor component that is: incompatible with acids (reaction with acids releases carbon dioxide), incompatible with alum and ammonium salts, and will ignite on contact with fluorine.

Hazardous decomposition products

Thermal decomposition can produce calcium oxide and calcium dioxide.

Hazardous polymerization

Polymerization will not occur

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11. TOXICOLOGICAL INFORMATION

Potential Health Effects

The potential effects on human health stated below are based on our knowledge of the product and statistically derived from the cumulative data estimates of the hazardous components of the product. Do note that the product has not been actually tested.

Acute toxicity

Experimental/calculated data:

LD50, oral: > 5,000 mg/kg (the product is not harmful if ingested)

LD50, dermal: > 5,000 mg/kg (the product is not harmful in contact with skin)

LC50, inhalation: > 20 mg/L (the product is not harmful if inhaled)

Skin Corrosion

This product causes skin irritation and serious eye irritation.

Respiratory / Skin sensitization

The product is not expected to cause any allergic skin reaction in contact with skin or cause allergy or asthma symptoms or breathing difficulties if accidentally inhaled.

Germ cell mutagenicity / Reproductive toxicity / Developmental toxicity

Based on the assessment of available information, the product is: not mutagenic in bacteria and is not expected to cause reproductive and developmental toxicity.

Carcinogenicity

This product contains silica sand, which contains respirable crystalline silica dust that is classified as a carcinogen to humans.

Specific Target Organ Toxicity – Repeated Exposure

Prolonged and/or massive inhalation of respirable crystalline silica dust may cause the following:

- 1.) Lung fibrosis, commonly referred to as silicosis. The three types of silicosis include:
 - a.) Simple chronic silicosis – which results from long-term exposure (more than 20 years) to low amounts of respirable crystalline silica. Nodules of chronic inflammation and scarring provoked by the respirable crystalline silica form in the lungs and chest lymph nodes. This disease may feature breathlessness and may resemble chronic obstructive pulmonary disease.
 - b.) Accelerated silicosis – occurs after exposure to larger amounts of respirable crystalline silica over a shorter period of time (5-15 years). Inflammation, scarring, and symptoms progress faster in accelerated silicosis than in simple silicosis.
 - c.) Acute silicosis – results from short-term exposure to very large amounts of respirable crystalline silica. The lungs become very inflamed and may fill with fluid, causing severe shortness of breath and low blood oxygen levels.

Progressive massive fibrosis may occur in simple or accelerated silicosis, but is more common in the accelerated form. Progressive massive fibrosis results from severe scarring and leads to the destruction of normal lung structures.

- 2.) Tuberculosis: Silicosis increases the risk of tuberculosis.
- 3.) Autoimmune and Chronic Kidney Diseases: Some studies show excess numbers of cases of scleroderma, connective tissue disorders, lupus, rheumatoid arthritis, chronic kidney diseases and end-stage kidney disease in workers exposed to respirable crystalline silica.
- 4.) Non-Malignant Respiratory Diseases (other than silicosis): Some studies show an increased incidence in chronic bronchitis & emphysema in workers exposed to respirable crystalline silica.

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12. ECOLOGICAL INFORMATION

Elimination information

This product is non-biodegradable and is not expected to create environmental hazard unless dumped in massive quantities.

13. DISPOSAL CONSIDERATIONS

This product can be disposed off by landfill at an approved site, in accordance with local regulations

14. TRANSPORT INFORMATION

This product is not dangerous for transport under the current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

15. REGULATORY INFORMATION

Applicable National Regulations

This product is subject to the requirements in the following acts/regulations:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations
Environmental Protection and Management Act and Environmental Protection and Management
Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives)

International Regulations

This product is classified as hazardous pursuant to the provision set forth in Directives 67/548/EEC and 1999/45/EC and/or EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.

OSHA/MSHA Hazard Communication

This product is considered by OSHA/MSHA to be a hazardous chemical and should be included in the employer's hazard communication program.

16. OTHER INFORMATION

The information and data contained herein are believed to be accurate and reliable; however, it is the user's responsibility to determine suitability of use. Since QUICSEAL Construction Chemicals Pte. Ltd. cannot know all of the uses to which its products may be put or the conditions of use; it makes no warranties concerning the fitness or suitability of its products for a particular use of purpose.

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