



SAFETY DATA SHEET
QUICSEAL 102
LIQUID APPLIED ELASTOMERIC PU WATERPROOFING MEMBRANE

1. IDENTIFICATION OF THE PRODUCT AND THE SUPPLIER

Product Name: QUICSEAL 102 – Liquid Applied Elastomeric PU Waterproofing Membrane
Product Use: Elastomeric waterproofing membrane

Details of the supplier:

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

Telephone No. : (65) 6742 4466
Fax No. : (65) 6741 4666

2. HAZARDS IDENTIFICATION

Flammable liquid – Category 3
Serious eye damage – Category 1

GHS LABEL ELEMENTS

Symbol(s):



Signal Word

Danger

Hazard Statements:

H226: Flammable liquid and vapour
H318: Causes serious eye damage

Precautionary Statements

Prevention

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

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Response

P303+P361+P353: IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash it before reuse.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P370+P378: In case of fire: Use carbon dioxide, foam, or dry powder to extinguish.

Storage

P403+P235: Store in a well ventilated place. Keep cool.

Disposal

P501: Dispose of contents/container in accordance with local and national regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

This product is an aromatic polyisocyanate solution which contains the following components classified as hazardous:

COMPONENTS	CAS No.	Index No.	Percentage
Toluene Diisocyanate (mixture of isomers)	26471-62-5 (584-84-9/91-08-7)	615-006-00-4	0.1 – 05%
Xylene isomers mixture	1330-20-7	601-022-00-9	10 – 25%
n-Butyl Acetate	123-8-4	607-025-00-1	0.5 – 2.5%
Methylated Silica	67762-90-7	--	0.5 – 2.5%

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

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 minutes. Hold eyelids open to ensure adequate flushing. Seek medical attention.

Skin Contact

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

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Ingestion

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

Notes to physician

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

5. FIRE-FIGHTING MEASURES**General Fire Hazards**

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Suitable Fire-extinguishing Media

Use carbon dioxide, foam, or dry powder to extinguish fire. In cases of large fires, water spray should be used.

Fire-fighting equipment / Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Fire-fighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

Hazardous Combustion Products

In case of fire, formation of carbon monoxide, nitrogen oxide, amines, isocyanate vapour, and traces of hydrogen cyanide is possible. Fire men have to wear self-containing breather apparatus.

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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, protective equipment, and emergency measures

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8). Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

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. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Methods and materials for containment and cleaning up

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

Remove mechanically. Cover remains with damp, fluid-binding material (sand, sawdust, chemical binder based on calcium silicate hydrate). Transfer to waste container after approx. 1 hour and do not seal (Caution: flammable vapors may accumulate in closed containers). Keep damp and in the open air in a safe place for 7 to 14 days.

Waste should be disposed of as described in Section 13.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Keep away from fire sources. Do not smoke.

Observe the usual precautionary measures for chemicals.

Precautions should generally be taken against electrostatic changes according to the equipment used and the way the product is handled and packed.

Ensure efficient ventilation. In all areas where products, like aerosols and /or vapour concentrations, are produced, exhaust ventilation must be provided. The air should be drawn away from the personnel handling the product, and the efficiency of the exhaust equipment should be periodically checked.

Conditions for safe storage, including any incompatibilities

Store in a well-ventilated area. Avoid exposure to temperatures above 40°C and below 5°C.

Keep away from foodstuffs, drinks and tobacco.

Keep away from flame, sparks, excessive temperatures and open flame.

Use approved vented containers. Keep containers closed, dry, and clearly labelled.

Empty product containers or vessels may contain explosive vapors.

Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

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8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control Parameters / Occupational Exposure Limits

For component Toluene Diisocyanate, CAS No: 584-84-9/91-08-7:
ACGIH: 0.005 ml/m³ (ppm) corresponding to 0.035 mg/m³ (eight hours average value)
Maximum limit of excess factor 4
Remark: 35, 36

For component Xylene (all isomers), CAS No: 1330-20-7:
ACGIH: 100 ml/m³ (ppm) corresponding to 440 mg/m³ (eight hours average value)
Maximum limit of excess factor 4
Remark: H (can be absorbed through the skin), DFG

For component n-Butyl acetate, CAS No: 123-86-4:
ACGIH: 100 ml/m³ (ppm) corresponding to 480 mg/m³ (eight hours average value)
Maximum limit of excess factor 1
Remark: 37, DFG

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment:

Hand Protection

Gloves constructed of fluorinated or butyl rubber are recommended.

The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves' limit depends on the duration of exposure.

Eye Protection

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Skin Protection

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

Respiratory Protection

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator, or for short periods of work a charcoal or A2-P2 filter, in insufficiently-ventilated areas, during spraying, or any other circumstance where an air-purifying respirator may not provide adequate protection.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Viscous liquid
Colour:	Depends on product variant (white, terracotta-red, green, grey, black, etc.)
Odour:	Smell of solvent
Setting point:	< 0°C
Ignition temperature:	> 200°C
Flash point:	> 25°C
Viscosity at 23°C:	> 90 s, according ISO 2431:1993 with 6mm nozzle
Solvent Separation:	< 3%, according UN Manual of Tests and Criteria, Section III, 32.5.1
Density:	1.37-1.46 g/ml (depending on colour)
Solubility in water:	Insoluble reacts as described in Paragraph 10
Explosion limits:	Liquid product is not explosion dangerous, but explosive air/vapour mixtures can be formed

10. STABILITY AND REACTIVITY

Chemical stability

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

Possibility of hazardous reactions

Exothermic reaction with amines and alcohols; reacts with water forming carbon dioxide, in closed containers risk of bursting owing to increase of pressure..

Conditions to avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible materials

Keep away from amines and alcohols.

Hazardous decomposition products

No hazardous decomposition products are expected when stored and handled correctly. In case of fire, formation of carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke) are expected.

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 toxic/harmful if swallowed.)

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

LC50, inhalation: 10 – 20 mg/L (the product is harmful if inhaled)

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Skin Corrosion / Irritation

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

Eye Critical Damage / Stimulativeness

Causes slight temporary reddening and swelling of the conjunctiva and slight reversible clouding of the cornea.

Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: The burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

Aromatic hydrocarbons, as xylene, irritate the skin and mucous membranes and are narcotic if inhaled in high concentrations.

Delayed appearance of the symptoms and allergic reaction in susceptible persons possible

12. ECOLOGICAL INFORMATION**Ecotoxicity**

This product is immiscible in water, however, it reacts with water at the interface producing carbon dioxide and forming a solid and insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by water-soluble solvents. Previous experience shows that polyurea is inert and non-degradable.

Keep product out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under relevant national regulations.

13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

The product and its residues should be considered special hazardous waste:

Liquid (not cured) - Adhesive and Sealants containing organic solvents or other dangerous substances.

Solid (cured) - Adhesive and Sealants wastes

The hazard level of waste containing this product should be evaluated according to applicable regulations.

Contaminated Packaging

After final product withdrawal, all residues must be removed from containers (drip-free). Once the product residues adhering to the walls of the containers have been rendered harmless, the product and the hazard labels must be invalidated. Containers must be disposed and/or recycled in compliance with national legislation and environmental regulations.

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14. TRANSPORT INFORMATION

Air Transport (ICAO-TI / IATA-DGR)

Declaration for Air Shipment: RESIN SOLUTION
Proper Shipping Name: 1866, RESIN SOLUTION
UN #: 1866
Class: 3 No. 31C
Packing group: III

Label:

**Land Transport (ADG)**

Shipping Name: 1866, RESIN SOLUTION
UN #: 1866
Class: 3 (If capacity of receptacles is > 450 litres,
then declared class 3, No. 31C)
Packing Group: III

Label:

**Sea transport (IMDG/GGVSee)**

Shipping Name: 1866, RESIN SOLUTION
UN #: 1866
Class: 3 (If capacity of receptacles is > 450 litres,
then declared class 3, No. 31C)
Packing Group: III
Marine pollutant: No

Label:



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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