



**SAFETY DATA SHEET
QUICSEAL 108
SUPER SEAL**

1. INFORMATION OF THE SUBSTANCE/COMPOUND AND THE SUPPLIER

Product Name: QUICSEAL 108 – Super Seal
Product Use: Liquid-applied polyurethane waterproofing membrane

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:

Flammable liquid - Category 3
Respiratory sensitization - Category 1
Aspiration hazard - Category 1
Chronic aquatic toxicity - Category 2

GHS LABEL ELEMENTS

Symbol(s):



Signal Word

Danger

Hazard Statements:

H226: Flammable liquid and vapour.
H304: May be fatal if swallowed and enters airways.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H411: Toxic to aquatic life with long lasting effects.

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165581CC1-2014-AQ-GER-DAMK



165582CC1-2014-AE-GER-DAMK

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 electrical/ventilating/lighting equipment.
 P242: Use only non-sparking tools.
 P243: Take precautionary measures against static discharge.
 P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P284: (In case of inadequate ventilation) Wear respiratory protection.

Response

- P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable to breathing.
 P331: Do NOT induce vomiting.
 P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
 P370+P378: In case of fire: Use appropriate extinction.
 P391: Collect spillage.

Storage

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

Disposal

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

3. COMPOSITION / INFORMATION ON INGREDIENTS

This product contains the following components classified as hazardous:

COMPONENTS	CAS No.	EINECS No.	Percentage
Solvent naphtha (petroleum), light aromatic	64742-95-6	265-199-0	25 – 35%
2-methoxy-1-methylethyl acetate	108-65-6	203-603-9	0.5 – 2.5%
3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate	4098-71-9	223-861-6	< 0.5%

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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.

Most important symptoms and effects, both acute and delayed

Irritation to eyes, skin, upper respiratory system; headache, drowsiness, dizziness, nausea, vomiting, visual disturbance..

5. FIRE-FIGHTING MEASURES

General Fire Hazards

This product is classified as a FLAMMABLE LIQUID. 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

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO₂, water spray, fire fighting foam, and other gaseous agents.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

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

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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

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

Further information

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

6. ACCIDENTAL RELEASE MEASURES

Emergency Measures

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.

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. 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.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Handle as a combustible liquid. Keep away from heat, sparks, excessive temperatures and open flame! No smoking or open flame in storage, use or handling areas. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Conditions for safe storage, including any incompatibilities

Store in a cool place. Avoid exposure to temperatures above 40°C and below 50°C. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

Engineering Measures

Provide adequate ventilation. This should be achieved by the use of local exhaust ventilation and good general extraction. Spray operator even when good ventilation is provided must wear air-fed protective respiratory equipment. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory must be worn. (See Personal Protection).

Control Parameters / Occupational Exposure Limits

Occupational exposure limit for:

<u>EINECS-No.</u>	<u>Chemical</u>	<u>STEL</u>	<u>LTEL</u>
223-861-6	3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate	MAK	0.01 ppm
203-603-9	2-methoxy-1-methylethyl acetate	100	50 ppm
265-199-0	Solvent naphtha (petroleum), light aromatic	MAK	50 ppm

Personal Protective Equipment

Hand Protection

For prolonged or repeated contact, gloves constructed of nitrile, neoprene, or PVC are recommended. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Eye Protection

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

Skin Protection

Personnel should wear anti-static clothing made of natural fibre or of high temperature resistant synthetic fibre.

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 if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, 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:	Transparent. With addition of colour paste: White, red, green, grey, blue, 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:	1.02 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 flammable. The liquid and vapour is readily combustible.

Possibility of hazardous reactions

The product reacts slowly with water resulting in evolution of carbon dioxide. In closed containers, pressure build up could result in distortion, blowing and in extreme cases bursting of the container.

Conditions to avoid

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

Incompatible materials

Keep away from oxidizing agents, strongly alkaline and strongly acidic materials, amines, alcohols and water.

Hazardous decomposition products

In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide, may be produced.

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 Acute Toxicity Estimates (ATE):
LD50, oral: > 5,000 mg/kg (the product is not orally toxic)
LD50, dermal: > 5,000 mg/kg (the product is not dermally toxic)
LC50, inhalation: ~ 11 mg/L (the product is harmful if inhaled)

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Skin and Eye Irritation

This product contains the following component classified as skin and eye irritant:

COMPONENTS	CAS No.	Skin Test	Eye Test
Solvent naphtha (petroleum), light aromatic	64742-95-6	Skin Irritant Category 3	Non-irritant
3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate	4098-71-9	Skin Irritant Category 1	Skin Irritant Category 1

Respiratory / Skin sensitization

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and a tightness of the chest.

Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability.

This product may cause an allergic skin reaction.

Aspiration hazard

This product may be harmful if swallowed and enters airways.

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)

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. Repeated or prolonged skin contact may lead to allergic contact dermatitis.

12. ECOLOGICAL INFORMATION

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

Chronic toxicity to the aquatic environment

Estimated LC values based on component's toxicity to fish: LC50 (96h): 1-10 mg/L

The product is not rapidly degradable with an estimated $\log K_{ow} \geq 4$.

This product is toxic to aquatic life with long lasting effects (Chronic toxicity to the aquatic environment Category 2)

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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 (ADG)

Shipping Name: RESIN SOLUTION
UN #: 1866
Hazard Class: 3 No. 31C
Packing Group: III

Label:



Air Transport (IATA)

Shipping Name: RESIN SOLUTION
UN #: 1866
Class: 3 No. 31C
Packaging group: III

Label:



Sea transport (IMDG)

Shipping Name: RESIN SOLUTION
UN #: 1866
Class: 3 No. 31C
Packaging group: III
EmS Number: F-,E S-E
Marine pollutant: Yes

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.

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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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