



**SAFETY DATA SHEET
QUICSEAL 191
CRYSTASIL**

1. INFORMATION OF THE SUBSTANCE/COMPOUND AND THE SUPPLIER

Product Name: QUICSEAL 191 – Crystasil
Product Use: Powder admixture for concrete and mortar

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

GHS Classification:

Carcinogenicity - Category 1A
Specific target organ toxicity, repeated exposure - Category 1

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

Danger

Hazard Statements

H350: May cause cancer through inhalation
H372: Causes damage to organs through prolonged or repeated exposure (lungs).

Precautionary Measures

Prevention

P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P260: Do not breathe dust.
P280: Wear protective gloves, protective clothing, eye protection and respiratory protection.

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Response

P308+P313: If exposed or concerned: Get medical advice/attention.

P314: Get medical advice/attention if you feel unwell.

Storage

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.	Index No.	Percentage
Silicon dioxide	7631-86-9	--	--	50 - 80%

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.

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.

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.

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

This product poses no fire-related hazard. If material is involved in fire, avoid breathing airborne dust.

Suitable Fire-extinguishing Media

Use extinguishing media appropriate for surrounding fire.

Fire-fighting equipment

A self-contained breathing apparatus (SCBA) is recommended to limit exposures to combustion products when fighting any fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective equipment

Avoid breathing dust. Use respiratory protection for dust and the appropriate skin and eye protection (safety goggles, gloves).

Environmental Precautions

Do not wash product down sewage and drainage systems or into bodies of water (e.g. streams).

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 wet product and place in container. Allow material to dry or solidify before disposal. 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 or wet with powder product. Thoroughly wash skin after exposure to dust or wet 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.

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8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters / Occupational Exposure Limits

This product contains trace amounts of the following substance with relevant occupational exposure limits:

Silica - crystalline cristobalite, respirable dust
Singapore Permissible Exposure Level (PEL), long-term = 0.05 mg/m³

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

Under ordinary conditions no respiratory protection is required. 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 or wet product 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 wet product and immediately wash exposed areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Powder
Appearance:	Ash grey or white powder
Flash Point:	Not flammable
Boiling Point:	Not Applicable
Melting Point:	Not Applicable
Flammability Limits:	None allocated
Water Solubility:	Slightly soluble in water
Solid Content:	approx. 100%
pH:	7 - 8 (in water)

10. STABILITY AND REACTIVITY

Stability

The product is stable in normal conditions of use and storage. However, keep the product dry until use. Avoid contact with incompatible materials.

Incompatible materials

Lime (calcium oxide) and magnesium oxide (high-magnesium lime)

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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: > 20 mg/L (the product is not toxic/harmful if inhaled)

Skin / Eye irritation

This product causes skin irritation but is not expected to cause eye irritation or damage.

Respiratory / Skin sensitization

The product is not expected to cause allergic skin reactions or respiratory sensitization.

Carcinogenicity

This product contains trace amounts of 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 (COPD).
 - 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 and emphysema in workers exposed to respirable crystalline silica.

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12. ECOLOGICAL INFORMATION

Ecotoxicity

This product is not expected to create environmental hazard unless dumped in massive quantities.

Additional information

Do not release product as rubbish into natural waters.

13. DISPOSAL CONSIDERATIONS

Disposal of material / container

The product and its container can be disposed off in authorized landfill site in accordance to national regulations.

14. TRANSPORT INFORMATION

This product is classified as NON-HAZARDOUS under 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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