



**SAFETY DATA SHEET  
QUICSEAL 531FR – PART A  
FIBER-REINFORCED PAVER-CRETE**

**1. INFORMATION OF THE SUBSTANCE/COMPOUND AND THE SUPPLIER**

Product Name: QUICSEAL 531FR – Fiber-Reinforced Paver-Crete (Part A)  
Product Use: Liquid component of 2-part fiber-reinforced mortar.

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**

This product is not classified as hazardous according to GHS criteria.

**GHS Label Elements and Precautionary Statements**

This product does not require a hazard warning label in accordance with GHS criteria.

**Other hazards which do not result in classification**

No specific dangers known, if the regulation/notes for storage and handling are considered.  
May be irritating to eyes and respiratory tract in a closed confined area.

No chronic hazard is expected when good industrial and personal hygiene is practiced.

Take note of the resulting hazards of this product when mixed with the powder component (see SDS of QUICSEAL 531FR Part B).

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

**Chemical Characterization/Description:** Water-based dispersion/mixture

**Components**

This product does not contain hazardous components in concentrations higher than the concentration limit according to the GHS Classification of Chemicals.

**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.

**QUICSEAL CONSTRUCTION CHEMICALS PTE LTD**

No. 7 Eunos Avenue 8A Eunos Industrial Estate Singapore 409460 Tel: (65) 6742 4466 Fax: (65) 6741 4666

Website: [www.quicseal.com](http://www.quicseal.com) Co.Reg. No.: 198201286W



**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.

**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, CO<sub>2</sub>)

**Further information**

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

**6. ACCIDENTAL RELEASE MEASURES****Personal Precautions and Protective equipment**

Avoid contact with skin and eyes; Use protective clothing (gloves, goggles) and safety equipment.

**Environmental Precautions**

Do not release untreated material into water sources. Dried material is environment-friendly.

**Methods and materials for containment and cleaning up**

For small amounts: Absorb spillage with absorbent materials such as sand, sawdust, paper, general-purpose binder, kieselguhr). Allow to dry before disposing material in accordance with regulations.

For large amounts: Pump off product.

For residues: Rinse away with water.

**7. HANDLING AND STORAGE****Handling**

Handle in accordance to good industrial hygiene and safety practices (i.e. gloves, goggles, and safety equipment should be used when handling chemicals; do not eat, drink, smoke when handling product). Wash hand thoroughly before eating and drinking. Any accidental contact with the product must be washed with clean water.

**Storage**

Store product protected from freezing and away from direct sunlight.

**QUICSEAL CONSTRUCTION CHEMICALS PTE LTD**

No. 7 Eunos Avenue 8A Eunos Industrial Estate Singapore 409460 Tel: (65) 6742 4466 Fax: (65) 6741 4666

Website: [www.quicseal.com](http://www.quicseal.com) Co.Reg. No.: 198201286W



## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Personal Protective Equipment

#### **Respiratory protection:**

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator as needed.

#### **Hand protection:**

Suitable chemical resistant gloves (EN 374) also with prolonged, direct contact  
Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm).  
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

#### **Eye protection:**

Safety goggles with side shield (frame goggles) (e.g. EN 166)

#### **General safety and hygiene measures:**

Hands and/or face should be washed before breaks and at the end of the shift. Avoid contact with skin and eyes.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Appearance:	Milky white liquid
Flash Point:	Not flammable (water-borne system)
Boiling Point:	100°C
Melting Point:	Not Applicable
Oxidising Properties:	Not Applicable
Flammability Limits:	None allocated
Water Solubility:	Soluble in water
Solid Content:	approx. 19%
Specific Gravity:	Approx. 1.02

## 10. STABILITY AND REACTIVITY

### **Stability**

The product is stable in normal conditions of use and storage. However, avoid extreme temperatures which can cause polymer decomposition.

### **Possibility of hazardous reactions**

No hazardous reactions are foreseeable under normal conditions of use and storage.

### **Incompatible materials**

No substances known that should be avoided.

### **Hazardous decomposition products**

No hazardous decomposition products are expected if stored and handled as prescribed/indicated.

## QUICSEAL CONSTRUCTION CHEMICALS PTE LTD

No. 7 Eunos Avenue 8A Eunos Industrial Estate Singapore 409460 Tel: (65) 6742 4466 Fax: (65) 6741 4666

Website: [www.quicseal.com](http://www.quicseal.com) Co.Reg. No.: 198201286W



## 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)

### Irritation / corrosion

The product is not irritating to the eyes or skin. If the product adheres to skin, irritation may occur when it dries.

Experimental/calculated data:

Skin: Species: rabbit / Result: non-irritant / Method: OECD Guideline 404

Eye: Species: rabbit / Result: non-irritant / Method: OECD Guideline 405

### Respiratory / Skin sensitization

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

### 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.

### Other Information:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

## 12. ECOLOGICAL INFORMATION

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

### Ecotoxicity

This product is not expected to be toxic to aquatic life based on the toxicity values to the following aquatic organisms:

Fish: LC50 (96h) > 100 mg/l, *Brachydanio rerio* (OECD Guideline 203, static)

Aquatic invertebrates: EC50 (48h) > 100 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

Aquatic plants: LC50 (72h) > 100 mg/l, *Scenedesmus subspicatus* (OECD Guideline 201)

### Persistence and degradability

Elimination information: >70% DOC reduction (OECD 302B; ISO 9888; 88/302/EEC, part C)

Easily eliminated from water.

## QUICSEAL CONSTRUCTION CHEMICALS PTE LTD

No. 7 Eunos Avenue 8A Eunos Industrial Estate Singapore 409460 Tel: (65) 6742 4466 Fax: (65) 6741 4666

Website: [www.quicseal.com](http://www.quicseal.com) Co.Reg. No.: 198201286W



**Bioaccumulation potential**

Based on structural properties, the polymer component is not biologically available. Accumulation in organisms is not expected.

**Additional information**

Do not release product untreated into natural waters. At the present knowledge of the product, no negative ecological effects are expected.

**13. DISPOSAL CONSIDERATIONS****Disposal of container**

Allow liquid to dry in the container. Peel-off dried material and dispose. The container may be used for other function after thorough washing.

**Disposal of material**

Dried material 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****Labelling requirements according to EEC Directives**

This product is not subject to labeling in accordance with EEC Directives.

Handle in accordance with good industrial hygiene and safety practice.

**National legislation/regulations**

According to the data available to us, the product is not hazardous under the relevant Singapore Legislation.

**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.

**QUICSEAL CONSTRUCTION CHEMICALS PTE LTD**

No. 7 Eunos Avenue 8A Eunos Industrial Estate Singapore 409460 Tel: (65) 6742 4466 Fax: (65) 6741 4666

Website: [www.quicseal.com](http://www.quicseal.com) Co.Reg. No.: 198201286W





**SAFETY DATA SHEET  
QUICSEAL 531FR – PART B  
FIBER-REINFORCED PAVER-CRETE**

**1. INFORMATION OF THE SUBSTANCE/COMPOUND AND THE SUPPLIER**

Product Name: QUICSEAL 531FR – Fiber-Reinforced Paver-Crete (Part B)  
Product Use: Powder component of 2-part fiber-reinforced mortar

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 (Office Hours: 9:00am – 5:00pm)

**2. HAZARDS IDENTIFICATION**

**GHS Classification:**

Skin irritation - Category 2  
Eye irritation - Category 2  
Specific target organ toxicity (repeated exposure) - Category 3

**GHS LABEL ELEMENTS**

**Symbol(s)**



**Signal Word**

Warning

**Hazard Statements**

H315: Causes skin irritation  
H319: Causes serious eye irritation  
H335: May cause respiratory irritation

**Precautionary Measures**

Prevention

P261: Avoid breathing dust.  
P264: Wash hands and forearms thoroughly after handling.  
P271: Use only outdoors or in a well-ventilated area.  
P280: Wear protective gloves/protective clothing/eye protection.

**QUICSEAL CONSTRUCTION CHEMICALS PTE LTD**

No. 7 Eunos Avenue 8A Eunos Industrial Estate Singapore 409460 Tel: (65) 6742 4466 Fax: (65) 6741 4666

Website: [www.quicseal.com](http://www.quicseal.com) Co.Reg. No.: 198201286W



165581CC1-2014-AQ-GER-DAMK



165582CC1-2014-AE-GER-DAMK

Response

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P332+P313: If skin irritation occurs: Get medical advice/attention.

P337+P313: If eye irritation persists: Get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

Storage

P402+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked-up.

Disposal

P501: Dispose of contents/container in accordance with Singapore regulations.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

This product contains the following components classified as hazardous:

COMPONENTS	CAS No.	EINECS No.	Index No.	Percentage
Portland Cement	65997-15-1	--	--	40 - 55%
Silica Sand	14808-60-7	--	--	30 - 40%

**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 for abrasions on the eye surface.

**Skin Contact:**

Wash with cool water and a pH neutral soap or a mild skin detergent. Seek medical attention for rash, burns, irritation, dermatitis, and prolonged unprotected exposures to wet product, cement mixtures or liquids from wet cement.

**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.

**QUICSEAL CONSTRUCTION CHEMICALS PTE LTD**

No. 7 Eunos Avenue 8A Eunos Industrial Estate Singapore 409460 Tel: (65) 6742 4466 Fax: (65) 6741 4666

Website: [www.quicseal.com](http://www.quicseal.com) Co.Reg. No.: 198201286W



## 5. FIRE-FIGHTING MEASURES

### General fire hazards

This product poses no fire-related hazard. As a general precaution during fire-fighting involving the product, avoid breathing dust and fumes. Wet product is alkaline/caustic.

### Fire-fighting equipment

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

### Suitable fire-extinguishing media

Use extinguishing media appropriate for surrounding fire.

## 6. ACCIDENTAL RELEASE MEASURES

### Methods and materials for containment and cleaning up

Collect the 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 off dry/solidified product according to Singapore 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.

## QUICSEAL CONSTRUCTION CHEMICALS PTE LTD

No. 7 Eunos Avenue 8A Eunos Industrial Estate Singapore 409460 Tel: (65) 6742 4466 Fax: (65) 6741 4666

Website: [www.quicseal.com](http://www.quicseal.com) Co.Reg. No.: 198201286W





## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Occupational Exposure Limits

Portland Cement, CAS No: 65997-15-1: ACGIH TLV = 10 mg/m<sup>3</sup> (total dust)

Silica Sand (Quartz), CAS No: 14808-60-7: Singapore PEL (long-term) = 0.1 mg/m<sup>3</sup>

### 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 42 CFR 84 standard-approved particulate respirator/dust mask that is properly fitted and is in good condition during handling of the product especially when dust is 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:	Black powder
Flash Point:	Not flammable
Oxidising Properties:	Not Applicable
Flammability Limits:	None allocated
Water Solubility:	Slightly soluble in water
Solid Content:	approx. 100%
pH:	11 – 12 (wet)

## 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

Wet product is alkaline and is incompatible with acids, ammonium salts and aluminum metal. The product dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. The product reacts with water to form silicates and calcium hydroxide. Silicates react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.

**QUICSEAL CONSTRUCTION CHEMICALS PTE LTD**

No. 7 Eunos Avenue 8A Eunos Industrial Estate Singapore 409460 Tel: (65) 6742 4466 Fax: (65) 6741 4666

Website: [www.quicseal.com](http://www.quicseal.com) Co.Reg. No.: 198201286W



## 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, following the classification principles of the Globally Harmonized System of Classification of Chemicals (GHS). Do note that the product has not been subjected to actual toxicological tests.

### Acute Toxicity

Acute Toxicity Estimates (ATE) based on the hazardous components of the product:

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 Corrosion

In its wet state (when mixed with water), this product causes skin irritation.

### Serious Eye Damage

In its wet state, this product causes serious eye irritation.

### Respiratory / Skin sensitization

This product is not expected to cause allergic skin reaction in contact with skin (skin sensitization) or respiratory allergy/asthma symptoms/breathing difficulties if inhaled (respiratory sensitization).

### Germ cell mutagenicity / Reproductive toxicity / Developmental toxicity

Based on the assessment of available information, studies have shown that the product's components are not mutagenic in bacteria and are not expected to cause reproductive and/or developmental toxicity.

### Carcinogenicity

The product contains minute amounts of respirable crystalline silica which is classified as a Group 1 carcinogen by the International Agency for Research on Cancer (IARC). While the respirable crystalline silica content of the product (<0.1%) is insufficient for GHS classification, long-term exposure to significantly large amounts may result in lung fibrosis (silicosis).

### Specific target organ toxicity (Repeated Exposure)

Based on the available information, the product is not expected to cause damage to any specific organs after a single or prolonged/repeated exposure. However, this product may cause respiratory irritation upon repeated exposure to the powder dust.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

There is insufficient available data (toxicity to aquatic organisms) specific for the product's components. The metal components of metal-containing inorganic substances such as cement and silica sand show few toxic effects at physiological pH levels, but transformation to more soluble ionic forms may introduce new or magnified effects.

### Persistence and degradability

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

## QUICSEAL CONSTRUCTION CHEMICALS PTE LTD

No. 7 Eunos Avenue 8A Eunos Industrial Estate Singapore 409460 Tel: (65) 6742 4466 Fax: (65) 6741 4666

Website: [www.quicseal.com](http://www.quicseal.com) Co.Reg. No.: 198201286W



**Mobility**

Most metal components of cement and silica sand will exhibit limited mobility in dry soil and remain in the upper layer; some will leach locally into ground water and/or surface water ecosystems when soaked by rain.

**13. DISPOSAL CONSIDERATIONS****Disposal of the product**

This product can be disposed of by burial in a landfill specifically licensed to accept chemical wastes or by incineration in a licensed facility in accordance with Singapore regulations.

**Disposal of container**

Decontaminate empty bags. Observe all label safeguards until the bags are cleaned from the powder contents. Dispose of bags by burial in a landfill specifically licensed to accept chemical wastes or by incineration in a licensed facility in accordance with Singapore regulations.

**14. TRANSPORT INFORMATION**

This product is NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS 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 (IMDG) Code, 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

**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.

**QUICSEAL CONSTRUCTION CHEMICALS PTE LTD**

No. 7 Eunos Avenue 8A Eunos Industrial Estate Singapore 409460 Tel: (65) 6742 4466 Fax: (65) 6741 4666

Website: [www.quicseal.com](http://www.quicseal.com) Co.Reg. No.: 198201286W

