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## MATERIAL SAFETY DATA SHEET

Classified as Non Hazardous according to criteria of Australian Safety and Compensation Council ASCC (formerly NOHSC), Approved Criteria for Classifying Hazardous Substances (NOHSC: 1008) 3<sup>rd</sup> Edition. Risk & Safety Phrases are not applicable to this product.

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### 1. IDENTIFICATION OF MATERIAL & SUPPLIER

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**Brand Name:** Fiberfrax®

**Ship. Name (CSN):** None Allocated

**Product Names:** Rigidiser

**Other Names:** Hardener  
Foamfrax Binder A

**UN Number:** None Allocated  
**DG Class:** None Allocated  
**Packaging Group:** None Allocated  
**Hazchem Code:** None Allocated  
**Poisons Schedule:** Not Scheduled  
**Product Use:** Refractory Binder.

**Supplier:** Unifrax Australia Pty. Ltd.

**Contact:** See Page 7

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### 2. HAZARDS IDENTIFICATION

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**Flammability**  
**Fire Hazards:** Non flammable

**Explosive Hazards:** Non explosive

**Health Hazards:** Irritating to eyes, skin, respiratory system and disturbances to gastro intestines.

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### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

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<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
	Amorphous silica	7631-86-9	14.5 - 50%
	Water	7732-18-5	50 - 85%
	Titrateable Alkali (as Na <sub>2</sub> O)		0.10 - 0.58%

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### 4. FIRST AID MEASURES

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**Ingestion** If swallowed, give 2 glasses of water immediately and induce vomiting. Seek medical advice.

**Eye** Hold eye open and irrigate continuously for at least 15 minutes. Seek medical advice.

**Skin** Wash affected areas with copious quantities of water.

**Inhalation** If large amounts are inhaled remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. Lay person down, keep warm and rested. Ensure passageway is clear, seek medical advice.

**First Aid Facilities** No special requirements.

**Advice to Doctor** Treat symptomatically.

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### 5. FIRE FIGHTING MEASURES.

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**Fire Explosion Hazard:** Not Flammable and not explosive.

**Hazardous Reactions/  
Decomposition Products** Refer to SAFE HANDLING INFORMATION

**Hazchem Code:** None Allocated.

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### 6. ACCIDENTAL RELEASE MEASURES

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**Spills:** If spillage occurs in a confined space ensure adequate ventilation.  
Contain all spills within a bund. Contain / prevent contamination of drains and waterways. Use sand, earth or Vermiculite to contain spillage. Treatment, storage, transportation and disposal of waste must be in accordance with applicable Federal, State and local regulatory requirements.

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### 7. HANDLING & STORAGE

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#### SAFE HANDLING INFORMATION

**Handling:** Wear rubber or PVC gloves conforming to AS2161.  
Chemical goggles conforming to AS1336 and AS1337.

**Storage** Keep containers tightly closed when not in use. Store at temperatures above 2<sup>0</sup> C to avoid irreversible precipitation of silica.  
Do NOT store with food, drink or tobacco in areas where they may become contaminated with this material.

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### 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

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**Exposure Limits** None established for the formulated substance.  
Dust resulting from dried product spills or deposits may be considered to be amorphous silica.

Amorphous Silica:  
Worksafe TWA : 2mg/m<sup>3</sup> respirable dust

#### 8. Exposure Controls & Personal Protection cont'd:

Worksafe STEL : none established

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TLV (ACGIH) : 10 mg/m<sup>3</sup> total dust

**Engineering Controls:** Ensure adequate ventilation to conform with exposure standard.

**Personal Protection:** Wearing of the following personal protective equipment is recommended.  
Rubber or PVC gloves conforming to AS2161.  
Chemical goggles conforming to AS1336 and AS1337.

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### 9. PHYSICAL & CHEMICAL PROPERTIES

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<b>Appearance</b>	Blue or Cloudy liquid
<b>Boiling/Melting Point</b>	100 °C at 101.3 kPa
<b>Vapour Pressure</b>	24 mm Hg at 25 deg C
<b>Specific Gravity</b>	1.21 – 1.40
<b>Ph</b>	8.4 – 10.4
<b>Flash Point / Limit</b>	None
<b>Corrosiveness</b>	
<b>Solubility in Water(g/L)</b>	Completely soluble.

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### 10. STABILITY & REACTIVITY

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**Stability:** Stable under normal conditions of use.

**Hazardous Reactions** Refer to SAFE HANDLING INFORMATION  
**Decomposition Products**

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### 11. TOXICOLOGICAL INFORMATION

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#### HUMAN DATA

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**Irritant Properties:** The alkalinity of this product could cause a chemical irritation to the skin and eyes if prolonged and repeated contact.

**Respiratory Effects:** None expected in the normal use of the product, when the product has dried and during removal situations there is the potential for dust generation, which can affect pre-existing respiratory conditions. The amorphous silica used to produce this product is of low acute toxicity, it is not classed as carcinogenic or genotoxic

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### 12. ECOLOGICAL INFORMATION

This material must not be disposed into drains or water causes.

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### 13. DISPOSAL CONSIDERATIONS

Disposal of waste must be in accordance with applicable Federal, State and local regulatory requirements.

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### 14. TRANSPORT INFORMATION

No special transport requirements are necessary.

<b>UN Number</b>	None Allocated
<b>Shipping Name</b>	None Allocated
<b>DG Class</b>	None Allocated
<b>Packaging Group</b>	None Allocated
<b>Hazchem Code</b>	None Allocated
<b>Poisons Schedule</b>	Not Scheduled

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### 15. REGULATORY INFORMATION

**Risk Statement:** Irritating to eyes, respiratory system and skin.

**Safety Statement:** S22 Do not breathe dust. S52 Avoid contact with eyes. S38

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In insufficient ventilation, wear suitable respiratory equipment.  
S40 To clean floor and all objects contaminated by this Material, use AS approved HEPA fitted vacuum cleaner.  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

**Hazard Category:** Harmful, irritant.

**Poisons Schedule:** Not scheduled.

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### 16. OTHER INFORMATION

#### RCF DEVITRIFICATION

As produced, all RCG fibers are vitreous (glassy) materials which do not contain crystalline silica. Continued exposure to elevated temperatures may cause these fibers to devitrify (become crystalline). The first crystalline formation (mullite) begins to occur at approximately 985° C (1805° F). Crystalline phase silica may begin to form at temperatures of approximately 1200° C (2192° F). The occurrence and extent of crystalline phase formation is dependent on the duration and temperature of exposure, fiber chemistry and/or the presence of fluxing agents. The presence of crystalline phases can be confirmed only through laboratory analysis of the "hot face" fiber.

IARC's evaluation of crystalline silica states "Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)" and additionally notes "carcinogenicity in humans was not detected in all industrial circumstances studied" (IARC Monograph Vol. 68, 1997). NTP lists all polymorphs of crystalline silica amongst substances which may "reasonably be anticipated to be carcinogens".

IARC and NTP did not evaluate after-service RCF, which may contain various crystalline phases. However, an analysis of after-service RCF samples obtained pursuant to an exposure monitoring

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**FIBERFRAX® RIGIDISER**

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agreement with the USEPA, found that in the furnace conditions sampled, most did not contain detectable levels of crystalline silica. Other relevant RCF studies found that (1) simulated after-service RCF showed little, or no, activity where exposure was by inhalation or by intraperitoneal injection; and (2) after-service RCF was not cytotoxic to macrophage-like cells at concentrations up to 320 g/cm<sup>2</sup> - by comparison, pure quartz or cristobalite were significantly active at much lower levels (circa 20 g/cm<sup>2</sup>).

### **CONTACT DETAILS:**

<b>Contact:</b>	During Business Hours	Ph: +61 3 9463 0000
<b>Customer Service Toll Free:</b>		Ph: 1300 797 888
<b>Emergency / After Hours Contact:</b>		Alan Smith
		Ph: 0409 288 916

**References:** Replaces MSDS dated 27 March 2007.

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**NOTICE:** *The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorisation given or implied to practise any patented invention without licence. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.*

... End Of Report ...

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