Unifrax Australia Pty. Ltd.
326 Settlement Road
Thomastown, VIC 3074
ACN 093 625 757
Ph: (03) 9463 7100 Fax: (03) 9464 5472

MATERIAL SAFETY DATA SHEET

Classified as Hazardous according to criteria of Worksafe Australia

1. IDENTIFICATION OF MATERIAL & SUPPLIER

Brand Name: Foamfrax B Binder

Product Names: Foamfrax B Binder

UN Number: None Allocated
DG Class None Allocated
Packaging Group None Allocated
Hazchem Code None Allocated
Poisons Schedule Not Scheduled
Product Use Restricted to "professional users" for application as part of the Foamfrax Insulation system in industrial furnaces, ovens, kilns, boilers and other process equipment. Should not be sold directly to the general public.

Manufacturer/Supplier:

Unifrax GmbH
Postfach 16 01 62
D-40564 Dusseldorf
Germany

Unifrax Australia Pty. Ltd.
326 Settlement Rd
Thomastown Victoria 3074
Australia

Unifrax UK Limited
Mill Lane, Rainford
St. Helens, Merseyside
UK

Unifrax France
17 Rue Antoine durafour
42420 Lorette, **France**

Contact: See Page 6.

2. HAZARDS IDENTIFICATION

Flammability
Fire Hazards: Non combustible. Packaging and surrounding materials may be combustible.

Explosive Hazards: Non explosive

Health Hazards: Mild irritation to skin and eyes may result from exposure to spray mist.

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3. COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients:	COMPONENT	EINECS	CAS	SYMBOL	R PHRASES
	Polyvinyl Alcohol	209-183-3	None	None	None assigned

Composition:

Chemical composition of Foamfrax Binder B: PVA <30% - Water 60-80%.

Description:

Foamfrax Binder B is an organic binder used in the Foamfrax insulation system.

4. FIRST AID MEASURES

Eye: In case of eye contact, flush abundantly with water; have eye bath available. Do not rub eyes.

Skin: In case of skin irritation, rinse affected areas with water and wash gently.

5. FIRE FIGHTING MEASURES.

Fire Explosion Hazard: Non combustible products.

Hazardous Reactions/ Decomposition Products Refer to SAFE HANDLING INFORMATION

Hazchem Code: None Allocated.

6. ACCIDENTAL RELEASE MEASURES

Spills or Release To the Environment Small spills - contain absorbent materials such as clay or any commercially available absorbent. Shovel

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6. Accidental Release Measures cont'd:

Reclaimed liquid and any absorbent into container for disposal.
Large Spills - Bund to prevent further movement and reclaim into suitable containers or use sludge gulper.
Do not flush to drains or surface water. Provide operators involved in cleaning with suitable impervious gloves and goggles.

7. HANDLING & STORAGE

Handling / Techniques to reduce dust emissions during handling.
Avoid contact with the skin, eyes and clothing.

Storage.
Store in original packaging in dry area whilst awaiting use.
Always use sealed and visibly labeled containers.
Avoid damaging the packaging and keep closed when not in use.
Emptied containers, which may contain debris, should be cleaned before disposal or recycling.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Engineering Controls: Maintain good general ventilation when using this product.

PERSONAL PROTECTIVE EQUIPMENT:

Skin Protection: Wear impervious gloves when handling the product and Attaching the feeding equipment. Rinse contaminated skin. Remove contaminated clothing and wash affected areas. Launder clothes before re-use.

Eye Protection: Wear chemical goggles when handling the product. Have eye wash facility available in the area.

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9. PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear Wheat or Honey-coloured liquid.
Odour	Slight
Boiling Point	100° C
Vapour Pressure	Not applicable.
Specific Gravity at 21°C ($H_2$0=1)	1,035
Flash Point	Not applicable
Flamm. Limit LEL	Not applicable
Solubility in Water	Soluble
Autoignition Temp	Unknown
Vapour Density	None
pH Value	None

10. STABILITY & REACTIVITY

Stability: Stable under normal conditions of use.

Hazardous Reactions Refer to SAFE HANDLING INFORMATION
Decomposition Products

11. TOXICOLOGICAL INFORMATION

Based on our knowledge and the information supplied by the manufacturer, this product is non toxic.

12. ECOLOGICAL INFORMATION

No adverse affects of this material on the environment are anticipated.

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13. DISPOSAL CONSIDERATIONS

Waste Disposal: Waste from these materials is not classified as a hazardous waste and can generally be disposed of in accordance with existing local, state, federal and international environmental regulations.

14. TRANSPORT INFORMATION

Not classified as dangerous goods.

15. REGULATORY INFORMATION

Hazard Category: Non-hazardous..

Poisons Schedule: Not scheduled.

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

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16. Other Information cont'd:

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 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/cm² - by comparison, pure quartz or cristobalite were significantly active at much lower levels (circa 20 g/cm²).

CONTACT DETAILS:

Contact:	During Business Hours	Ph: +61 3 9463 7100
Emergency / After Hours Contact:		Alan Smith
		Ph: 0409 288 916

References: Replaces MSDS dated 1st August 2007.

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*

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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 ...