



Designed to Take the Heat

## Kerathin Coatings

**Kerathin Coatings** are a series of protective, air setting, high purity emulsions used to coat and protect ceramic fibers. **Kerathin Coatings** are used to seal porous surfaces in order to reduce chemical attack while increasing resistance against erosion by gases, liquid metals, and abrasive dust. At temperatures exceeding 1000°C where radiant energy becomes the dominant mode of heat transfer, **Kerathin Coatings** increase the surface reflectivity, therefore increasing furnace efficiency.

**Kerathin Coatings** are air drying and may be fired immediately after drying. Ceramic bonding occurs at temperatures exceeding 1000°C (1832°F).

**Kerathin Coatings** are ready to use and available in a variety of service temperatures from 1260°C (2100°F) to 1800°C (3272°F) in order to match the coefficient of thermal expansion of the substrate material used. **Kerathin Coatings** can be used to seal ceramic fiber felt, blankets, modules, boards and shapes, and papers.

Property	Units	KERATHIN COATING GRADE				
		1260	1600	1600Z	1800	1600 HA
Max. Use Temp.	(°C)	1260	1500	1500	1800	1600
	(°F)	2300	2732	2732	3272	2912
Chemical Analysis	Al <sub>2</sub> O <sub>3</sub> (%)	64	76	39	85	98
	SiO <sub>2</sub> (%)	33	22	32	15	2
	ZrO <sub>2</sub> (%)	---	---	28	---	---
Wet Density	(kg/m <sup>3</sup> )	2000	1900	1900	1900	1900
	(lb/ft <sup>3</sup> )	125	119	119	119	119

- ▲ **Product form:** Ready to use liquid
- ▲ **Note:** HA represents high alumina content  
Z represents zirconium oxide
- ▲ **Packaging:** 5kg (11lb) plastic pails standard
- ▲ **Shelf Life:** 1 year (dry and cool condition; keep from freezing)



Designed to Take the Heat

---

## Kerathin Coatings

### *Instructions for Use*

**Kerathin Coatings** are ready-to-use, air-setting ceramic emulsion which can be trowelled, sprayed or gunned into place to seal ceramic fiber or high porous surfaces. It hardens while air drying. It is generally used in conjunction with **ALTRA**<sup>®</sup> materials to seal high porous surfaces.

1. Stir **Kerathin Coatings** well before each use. If necessary, the coating can be diluted with distilled or de-ionized water up to a maximum of 5% by weight. If not using the entire container, dilute only the amount of **Kerathin Coatings** needed in a separate container.
2. The amount of coating used will depend on the absorption properties of the material to be coated. A typical amount of coating is between 0.5 and 3 kg/m<sup>2</sup> (0.1 to 0.6 lb/ft<sup>2</sup>) for 0.5 to 1.5 mm (0.02 to 0.06"), thickness or penetration. In high temperature applications just use between 0.5 and 1.0 kg/m<sup>2</sup> (0.1 to 0.2 lb/ft<sup>2</sup>).
3. The surface of the material to be coated must be free of dust and grease. Before coating, lightly spray the surface of the material to be coated with **Kerathin Rigidizer** or water\* in high temperature applications to improve adhesion.
4. **Kerathin Coatings** adhere better if applied in several thin coats, allowing each layer of coating to thoroughly dry between coats.
5. **Kerathin Coatings** will air dry. For faster drying, subject the coating to temperatures marginally above 100°C (212°F). Ceramic bonding occurs at temperatures above 1000° C (1832°F).
6. After using **Kerathin Coatings**, ensure that the container is closed and airtight. Coating can be stored up to one year in a cool, frost-free condition.

▲ **Caution:** Some organics will be oxidized during the 1<sup>st</sup> firing cycle. Heating should occur in a well-ventilated area.

▲ **Note:** Distilled or de-ionized water are preferred for diluting **Kerathin Coatings**. This prevents contamination from typical tap water impurities, which may increase thermal shrinkage and the risk of spalling.

▲ **Shelf Life:** 1 year (dry and cool condition; keep from freezing). Correct storage can extend the shelf life up to a few years.