

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 ₂ O ₃ (%)	64	76	39	85	98
	SiO ₂ (%)	33	22	32	15	2
	ZrO ₂ (%)	---	---	28	---	---
Wet Density	(kg/m ³)	2000	1900	1900	1900	1900
	(lb/ft ³)	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).

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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®** 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/m² (0.1 to 0.6 lb/ft²) 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/m² (0.1 to 0.2 lb/ft²).
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 1st 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.