



# Wesolok

colloidal alumina  
for ceramic fiber bonding

## Why Wesolok?

- **Withstands higher temperatures** - High purity alumina provides for low reactivity and can be used to replace colloidal silica where greater refractoriness at use temperatures is required.
- **No cristobalite** – Completely cristobalite free eliminating a common source of thermal shrinkage problems and health-related concerns.
- **Small particles readily floc to fibers** – Has a moderate cationic charge which works well with all starches, and especially well with a cationic starch like Westar+.

### Typical Properties

Appearance	White powder
pH (8% in water)	3.5 – 4.5
Loose Density	44 – 50 lbs/ft <sup>3</sup>
Al <sub>2</sub> O <sub>3</sub> , wt. %	76
Na, ppm	< 50
Surface Area, m <sup>2</sup> /g	220
Crystallite size (sol), nm	7
Bulk particle size, μm	40
Concentration limit, sol	8 wt%*

\* Higher concentrations will thicken and gel.

Wesolok alumina binder is a high purity boehmite (alumina monohydrate) powder ready for dispersion in water at up to 10% concentration to give stable colloidal alumina sols for bonding and rigidizing refractory fiber shapes.

### How to Use Wesolok for fiber bonding

Wesolok must be pre-dispersed in water and aged for several hours to become colloidal for optimum bonding. Add 20 lbs Wesolok to 25 gallons water to make an 8% sol, stir for 15 minutes, and age. Start with a balanced ratio of 6% starch and 6% alumina based on weight of fiber, and adjust as needed.

#### Typical Formulation:

		<u>with filler</u>
Water, Gallons	50	50
Refractory Fiber, lbs	8	8
Alumina filler, lbs	0	3
Westar+ Starch, lbs.	0.5	0.7
Wesolok 8% sol, lbs	6	8

Follow above order adding Westar+ dry and mix for ten minutes to disperse and swell starch before adding Wesolok. Mix an additional 15 minutes to complete floccing before forming.

#### Storage, Handling, Packaging, and Safety:

Wesolok must be stored dry and protected from moisture. Under these conditions Wesolok has an infinite shelf life.

Wesolok is available in fiber drums, 400 lbs net, loose. Cartons: 50 lbs. net.

Wesolok is non-toxic. Do not breathe dusts. Dispersions are mildly acidic. Protect eyes from splashes. See SDS for a complete safety discussion.

**For a price quote and valuable information  
on how we can help you improve your  
vacuum formed products call**

**WESBOND  
(302) 655-7917**