



# Wesolok D

colloidal alumina  
for rigidizing ceramic fiber shapes

## Why Wesolok D?

- **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.
- **Disperses easily** – Simple mixing with water will produce a colloidal alumina sol in 20 minutes.
- **Rigidizes effectively** - Can be used diluted or full strength for sealing or rigidizing of fiber bonded shapes.

## Typical Properties

Appearance	White powder
pH (20% in water)	3 - 5
Loose Density	40 – 60 lbs/ft <sup>3</sup>
Al <sub>2</sub> O <sub>3</sub> , wt. %	80
Na, ppm	250
Surface Area, m <sup>2</sup> /g	140*
Crystallite size, nm	18
Bulk particle size, μm	50
Concentration limit, sol	30 wt%**

\* After Activation (3 hours, 550°C)

\*\* Higher concentrations will gel

**Wesolok D** alumina binder is a high purity boehmite (alumina monohydrate) powder ready for dispersion in water at up to 30% concentration to give stable colloidal alumina sols for rigidizing refractory fiber shapes. Use **Wesolok D** to give fiber shapes that are more refractory and safer to use than colloidal silica rigidized shapes.

## How to Use Wesolok D for rigidizing

**Wesolok D** is easily converted to colloidal alumina sol by mixing with water. Mix powder into vortex and let mix for 20 minutes to disperse. Dry at 250°F (120°C). To set the rigidizer permanently, 750°F (400°C) is suggested as this will also remove the water of hydration from the alumina.

Blending by volume			
Water, Gallons	1	1	1
<b>Wesolok D</b> , lbs	2.0	3.0	3.5
Concentration, wt %	19	26	30

Blending by volume			
Water, liters	4.0	3.0	2.5
<b>Wesolok D</b> , kgs	1	1	1
Concentration, wt %	20	25	29

Blending by weight			
Water, lbs	35	36	38
<b>Wesolok D</b> , lbs	15	12	9.5
Concentration, wt %	30	25	20
Final volume, gallons	5	5	5

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

**Wesolok D** must be stored dry and protected from moisture. Under these conditions **Wesolok D** has an infinite shelf life. **Wesolok D** is available in fiber drums, 400 lbs net, loose. Cartons: 50 lbs. net. **Wesolok D** 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**