Wesoflok IFP

all-inorganic binder for saturation bonding of ceramic fibers

Wesoflok IFP is a dispersed form of Wesoflok IF (Inorganic Floccer), an all-inorganic binder and flocculating agent developed for use in colloidal silica recycle systems. **WES**BOND developed this unique new "Saturation Bonding" process which flocs an inorganic binder on the fibers in a colloidal silica sol of 10 - 20% concentration. This process bonds and semi-rigidizes in one vacuum forming/drying step.

Why Wesoflok IFP?

- **Completely inorganic –** No organic starch content so no off-gassing.
- **Reduces delamination tendencies** – Produces bonded shapes that are more uniform in density and hardness with reduced delamination.
- **As strong as starch -** Density and strength is equivalent to starch flocced shapes at slurry formulations as low as 10% colloidal silica and 12% Wesoflok IFP .
- **Greater surface hardness** - Surfaces flocced with our saturation bonding process are stronger and more durable than traditional starch-flocced shapes.

Typical Properties

Appearance	Tan liquid
Specific Gravity	1.09
pH	10.5
Total solids, %	15.0
Product LOI (800°C)*	4 – 5%
Fusion Point	2400°F
Toxicity	Non-Toxic. See SDS

Storage, Handling and Safety

Prolonged exposure to temperatures of 0°C (32°F) or below should be avoided as the binder will precipitate irreversibly.

Packaging

275 gal. liquid totes, 2500 lbs. net

How to Use Wesoflok IFP

Fill mix tank with 10 to 20% silica sol per chart below. Add ceramic fiber at normal concentration and mix to disperse. With continued good agitation, add Wesoflok IFP (60% by weight of fiber) slowly and allow 5 minutes to floc. Reduce agitation as soon as Wesoflok IFP is dispersed to keep from breaking up floc. Vacuum form or drop to forming tank and form in normal fashion except save all silica sol effluent for recycle; dry at a minimum of 250ºF.

Typical Formulation

Colloidal Silica, Gallons	50
Refractory Fiber, lbs	8
Wesoflok IFP, lbs	5

Levasil FO2040 or FX2040 N Colloidal Silicas are used depending on the product's tolerance for sodium, with dilution as shown below:

	Silica Concentration		
	20%	**15%**	**10%**
Specific Gravity	1.13	1.10	1.06
Density, pcf	9.42	9.17	8.84
Mixing by Weight:			
Levasil FO2040, lbs	100	100	100
Water, lbs	100	167	300
Mixing by Volume:			
Levasil FO2040, gals	10	10	10
Water, gals	13	22	39

The diluted silica sols are continuously recycled, without further dilution, and reused in subsequent batches. Total volume is maintained by adding more Levasil and water. Measuring specific gravity and adding Levasil or water controls concentration.

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

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