



Levasil FO2040

colloidal silica for fiber bonding

Levasil FO2040 is an alkaline, aqueous, sodium-stabilized dispersion of colloidal silica that is 40% solids by weight. The amorphous silica particles are discrete, have a slightly rough, spherical shape, and are present in a narrow particle size distribution. The particles carry a negative surface charge so they floc with cationic starch

Why Levasil FO2040?

- **Stronger fiber bonded shapes** - Extensive pilot plant studies show Levasil FO2040 gives stronger vacuum formed boards and shapes than smaller particle silica sols..
- **Better high temperature properties** - Lower sodium content than smaller silica sols gives lower shrinkage at temperatures up to 2300°F .
- **Saves money** - Balanced silica to starch floccing ratio is more economical giving high strength with less colloidal silica in formulation.
- **Rigidizes better** - Larger particles with lower sodium result in less shrinkage at end-use temperatures.

Typical Properties

Appearance	Clear liquid
Specific Gravity	1.30
Surface Area, m ² /g	200
Particle size, nm (calc)	14
Silica, wt%	40
Na ₂ O, wt.%	0.38
pH @ 25°C	10
Viscosity @ 25°C, cPs	13
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 silica will precipitate irreversibly.

Packaging

4,000 gal. for bulk tanks; 275 gal. IBC totes; plastic 55 gal. drums; 1 & 5 gal. pails.

How to Use Levasil FO2040

LEVASIL® FO2040 should be flocced with cationic corn starch, like Westar+ or Westar+3, starting with a ratio of 5% starch based on weight of total solids.

Typical Formulation:

		with filler		with filler
Water, Gallons	50	50	50	50
Refractory Fiber, lbs	8	8	8	8
Mullite 100 filler, lbs	-----	4	-----	4
Westar+ Starch, lbs.	0.4	0.6	-----	-----
Westar+3 Starch, lbs.	-----	-----	0.4	0.6
Levasil FO2040, lbs	1.2	1.8	1.4	2.1

Follow above order of addition. Add starch flakes dry and mix for 10 minutes to allow hydration and swelling of starch before adding colloidal silica; mix another 5 minutes to complete floccing before vacuum forming. Dry at 250°F.

Note proper use: For best results, always add starch to slurry before the colloidal silica; the cationic starch serves to give a cationic charge to the fibers for efficient exhaustion of the negatively-charged silica particles on fibers.

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

WESBOND
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