

# CIMBAR

## Performance Minerals

### BARIACE™

#### Surface Treated Barium Sulfate

Ultra-fine products manufactured using a proprietary process. Bariace products are highly dispersible pigments that are chemically and physically inert. They promote superior dispersibility of pigments in coatings and inks.

Bariace is a surface treated Barium Sulfate powder manufactured by coating particles with  $\text{SiO}_2 - \text{Al}_2\text{O}_3$ .

Bariace exhibits surface properties similar to surface coated  $\text{TiO}_2$  to improve film properties such as abrasiveness, dispersions, gloss and hardness.

PROPERTIES		
	Bariace B-30	Bariace B-34
<b>Chemical Analysis</b>		
BaSO <sub>4</sub>	94.0	94.0
SiO <sub>2</sub>	1.0	1.0
Al <sub>2</sub> O <sub>3</sub>	2.0	2.0
<b>Physical Properties</b>		
Soluble Salts %	0.1	0.2
Dispersed Particle Size, micron	.30	0.3
Oil Absorption, ml/100g	23.0	18.0
Pigment pH	8.0-9.0	8.0
Specific Gravity	4.0	4.0
Note	Surface Coated Barium Sulfate	Surface Coated Barium Sulfate

Bariace products are packaged in 25Kg paper bags.

#### Uses:

- Automotive coatings
- Specialty coatings
- Inks
- Plastics

#### Characteristics of Bariace Products

- Superior dispersibility and gloss
- Dispersibility similar to  $\text{TiO}_2$
- High affinity with binder due to  $\text{SiO}_2 - \text{Al}_2\text{O}_3$
- Thixotropic properties
- Haze-free gloss and leveling by superfilling effect
- Limited hiding power
- Encapsulates pigment particles to maximize color intensity.
- Improves printability.
- Thixotropic properties without lowering gloss.

(continued on back)

BARIACE™

**Dispersion of Bariace Products**

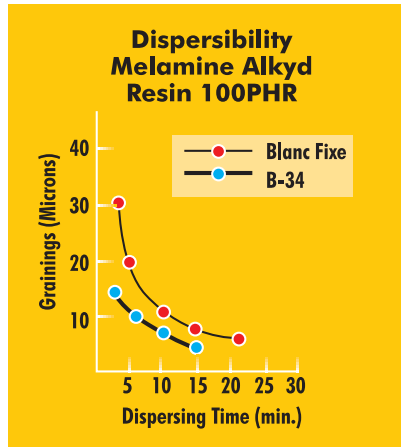
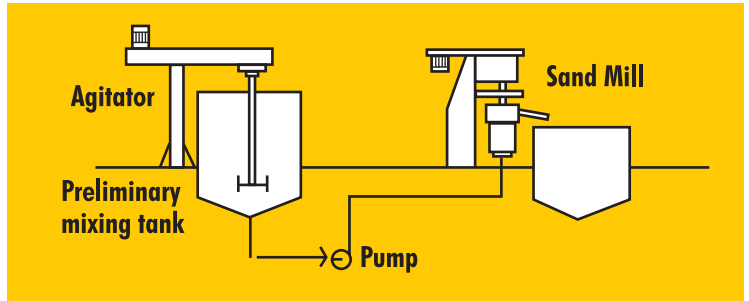
1. Bariace must be dispersed down to the finest particles to let it show the best of its properties in a coating formulation.
2. Relative grinding time to be fully dispersed is about twice the time needed to get to the 5 micron level.
3. Sand or bead mills are the best choice for dispersion. A combination of two different mills produces optimum dispersion.

**Initial Dispersion**

Ball Mill ..... Sand Mill  
Roll Mill ..... Sand Mill

**Secondary Dispersion**

4. Undispersed Bariace can precipitate and clog the bottom of the preliminary mixing tank. It may also stick to the inner wall of the pipe leading to the mill. For the elimination of these problems Bariace should be dispersed by ball or roll mill.
5. It is recommended that Bariace be dispersed with organic pigments that are hard to disperse. A Bariace dispersion paste and color dispersion can be prepared separately then mixed together as needed for paint formulation. For best results a minimum blend of 1:1 Bariace to pigment is recommended, but as much as 2:1 can be used.
6. Bariace can increase UV stability.



Formulation; PWC = 50%	100PHR
Pigment	15.0
J-524 (Alkyd Resin NV 60%)	17.5
J-820 (Melamine Resin NV 50%)	8.9
Xylene	4.9
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	40.3
Dispersing Mill;	Red Devil
	Paint
	Conditioner

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