GLOXIL BRIGHT

Field of application: Paint & Varnish

1. Description

GLOXIL bright is a thermally treated aluminum silicate material that serves as a functional filler, offering specific application-related advantages. This treatment enhances the chemical purity as well as the thermal stability of the material, providing it with excellent optical and functional properties such as brightness, opacity, and light scattering.

Characteristics

Appearance		free-flowing powder
Color CIELAB scale:	L* a* b*	98.6 -0.2 2.1
Residue > 40 µm		20 mg/kg
Bulk density		0.32 g/ml
Volatile matter at 105 °C		0.3 %
Density		2.7 g/cm³
Particle size distribution	D_{50} D_{97}	1.9 µm 12 µm
Surface area BET		9.5 m²/g
Oil absorption		68 g/100 g
pH value		6
Electrical conductivity		20 µS/cm

Packaging

Paper bags	á 25 kg
EVA bags	≤ 20 kg
Big Bags	550 - 900 kg
Bulk	on demand

Shelf life

Unlimited if stored properly under dry conditions.

2. Applications

In paint and varnish applications GLOXIL bright can be used as functional filler either on its own or combined with extenders or matting agents.

Fields of application

- road marking paints
- coil coatings
- powder coatings
- emulsion and silicate paints
- industrial paints
- wood and foil coatings
- primers and surfacers, also for the automotive industry
- electrophoretic paints
- adhesives and sealants

It stands out for its excellent dispersion properties, low yield point and pseudo plasticity in high solid formulations as well as very high brightness and color-neutrality.

GLOXIL bright enhances the opacity effect of pigments, thus it provides a replacement potential of titanium dioxide up to 20 %.

In clear coats it achieves transparency, a whitish glazing effect can result depending on loading.

The outstanding dispersion behavior enables paint production potentially without grinding, even for low film thickness applications.

Formulation principle:
Solvent-based, solvent-free, water-based

Hardening principle:
All conventional reaction types, also UV-curing

Minimum film thickness:
> 10 µm, less in special cases

Dosage:
up to 55 % depending on intended application likewise up to PVC 35, often 10 to 20 % w/w

3. Benefits

- low sieve residues
- outstanding dispersion behavior, even without grinding
- improved opacity (spacer effect), likewise potential for partial pigment replacement
- relatively low abrasivity
- quick drying
- weathering resistance
- scratch resistance
- abrasion resistance
- transparency[1]
- matting effect[1]

GLOXIL bright also provides the following benefits compared with SILLITIN:

- lower moisture content,
  less moisture absorption
- very high brightness
- high color neutrality
- improved dispersion behavior like the Sillitin puriss grades

[1]strongly dependent on formulation

4. Application examples

Road marking paints

- cost cutting potential by partial replacement of titanium dioxide up to 40 %
- improved abrasion resistance

Coil coating

- cost cutting potential by partial replacement of titanium dioxide up to 20 %

Adhesives based on silane terminated polymers (STP, 1 C moisture curing)

GLOXIL BRIGHT performs generally similar to Sillitin Z 86 puriss in adhesives:
- easy and quick incorporation, very good dispersion
- very high tensile strength of free film and high lap shear strength

Additional benefits versus SILLITIN Z 86 puriss:
- lower viscosity
- light grey color of the adhesive without titanium dioxide addition

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