GLOXIL BRIGHT

Field of application: Elastomers

1. Description

GLOXIL bright is a calcined kaolin 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		30 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		6 - 10 m²/g
Oil absorption		65 g/100 g
pH value		6

Packaging

Paper bags	á 20 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 elastomer applications GLOXIL bright can be used as a functional filler either on its own or in combination with other non-reinforcing or reinforcing fillers.

Fields of application

In general GLOXIL bright is suitable for any rubber products used for technical applications.

Its particular properties are that it provides a balanced relationship between tensile strength, tear strength, low compression set and excellent extrusion properties.

It is particularly suitable for very bright or white compounds.

GLOXIL bright also provides advantages in the following instances:

- very high dispersion requirements:
  - compounds with a high oil content
  - automotive profiles with very low surface defect rates
  - products with extremely thin walls (membranes)
  - very high surface quality requirements (roller coverings and offset blankets)
- prevention of filler caused mold fouling during the injection process or deposits in the orifice die (Plating) during extrusion

Methods of processing:
Any process commonly used in the rubber industry.

Elastomers:
BIIR, BR, CIIR, CR, HNBR, IIR, IR, NBR, NR, PNR, SBR;
CM, CSM, EPM, EPDM, EVM, Q

Dosage:
Generally in the range from 50 to 300 phr, depending on application, formulation and requirements.

3. Benefits

- low sieve residues
- good and rapid incorporation
- very good dispersion, also in critical compounds
- good flow properties
- excellent surfaces
- excellent extrusion properties
- no negative influence on curing rate
- low tensile and compression set
- high electrical resistance
- good aging properties
- high chemical resistance
- matting effect

GLOXIL bright also provides the following benefits compared with Sillitin:

- lower moisture content, less moisture absorption
- very high brightness, in compound too
- very high color-neutrality
- improved dispersion behavior like the Sillitin puriss grades
- slightly improved extrusion properties
- improved compression set possible
- best combination of extrusion properties and compression set (within the range of non surface treated grades)

• = low •••••• = high

4. Application examples

Plating

Prevention of filler caused mold fouling during the injection process or deposits in the orifice die (plating) during extrusion

Car body seals

- excellent extrusion properties
- quick cure
- higher tensile strength, higher tear resistance and markedly better compression set compared with conventional calcined clay in non-conductive compounds
- generally low compression set
- prevention of filler caused deposits in the orifice die (plating) during extrusion

Washing machine gaskets

- higher tensile strength and higher tear resistance versus calcined clay
- replacement of precipitated silica without deteriorating properties, faster cure and lower swelling in water and detergent lyes
- prevention of filler caused mold fouling

White building profiles (window and facade seals)

- good extrusion properties
- slightly higher tensile strength
- lower compression set

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