SILLITIN V 88

TECHNICAL DATA SHEET – Field of application: THERMOPLASTICS

1. Description

SILLITIN V 88 is a natural combination of corpuscular silica and lamellar kaolinite. These two elements together form a loose structure which offers particular advantages in terms of application possibilities when used as a functional filler.

Characteristics:

Appearance:	free-flowing powder
Brightness Y DIN 53 163:	86
Brightness Z DIN 53 163:	86
Sieve residue > 40 µm:	25 mg/kg
Sieve residue > 200 µm:	5 mg/kg
Volatile matter	
at 105 °C:	0.5 %
Density:	2.6 g/cm³
Particle size distribution	
D_{50} :	4.0 µm
D_{97} :	18.0 µm
Spec. surface area BET:	8 m²/g
Oil absorption:	47 g/100 g

Packaging:

Paper bags	à 25 kg
PE bags:	≤ 25 kg
EVA bags:	≤ 20 kg
Big Bags:	750 - 1200 kg
Bulk:	≤ 25 t

Shelf life:

Unlimited if stored properly under dry conditions.

2. Applications

In thermoplastic applications SILLITIN V 88 is used in films as a anti-blocking additive, primarily in the area of LDPE films or as a matting agent in TPU films.

SILLITIN V 88 achieves very good results in films of higher thickness, usually greater than 50 microns, being used as **anti-blocking additive**.
In contrast to synthetic silicas SILLITIN V 88 causes hardly any adsorption of slip additives due to its comparatively low surface area. Cost benefits are another positive aspect.
For thinner and very thin LDPE films Silfit Z 91 or the hydrophobic, alkyl silane treated Aktifit PF 111 are recommended. For TPU films the amino silane treated Aktifit AM is recommended.

Moreover, SILLITIN V 88 contains very low sieve residues compared to other natural mineral additives and can also be used for products in contact with food.

In addition SILLITIN V 88 is the suitable functional filler for **green house and agricultural films**. It performs in high **IR-absorption** and high light transmission in the visible wave length range with moderate haze. For even higher light transmission and lowest haze Silfit Z 91 and Sillitin Z 89 puriss are recommended.

Dosages:

- **Anti-blocking in LDPE:** depending on requirements, from 1000 ppm to 1%
- **Matting in TPU:** depending on desired gloss, 5 to 20 %
- **IR-absorber in green house and agricultural films:** depending on requirements and film thickness 5 to 15 %

3. Benefits

- very low residues
- very good dispersion behavior
- good matting effect
- low coefficient of friction
- good transparency
- high light transmission
- high IR absorption
- no consumption of slip additives
- complies with the standards on articles in contact with foodstuffs of the BfR and FDA
- cost-effective

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4. Particle size distribution

The measurement method for these particle size distribution is based on the Fraunhofer analysis of diffraction spectra. The analysis were performed with Mastersizer 3000, a laser apparatus from Malvern.

Important: The data on particle size distribution is highly dependent upon the method used, test preparations and the measuring device itself. As a result the values given may not be directly comparable with those provided by another manufacturer.
If you have any queries please contact us direct.