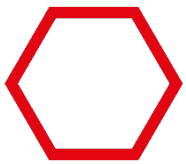


SILLITIN Z 89 (PURISS)

Field of application: Paint & Varnish

1. Description

SILLITIN Z 89 and SILLITIN Z 89 puriss 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
Color CIELAB scale:	L* a* b*	96.1 0.2 4.2
Residue > 40 µm		20 mg/kg
Volatile matter at 105 °C		0.5 %
Densitiy		2.6 g/cm³
Particle size distribution	D_{50} D_{97}	2.1 µm 9.5 µm
Surface area BET		11 m²/g
Oil absorption		55 g/100 g
Electrical conductivity		80 µS/cm
Refractive index n		1.55
Puriss grade: As a result of a sophisticated manufacturing process the very low residue is reduced even further from the values given above to the following: > 40 µm In addition the good dispersion behavior is once more improved.		8 mg/kg

Packaging

Paper bags	á 25 kg
EVA bags	≤ 20 kg
Big Bags	550 - 900 kg
Bulk	≤ 22 t

The puriss-grade is available in paper bags of 25 kilos only.

Shelf life

Unlimited if stored properly under dry conditions.

2. Applications

In paint and varnish applications SILLITIN Z 89 and SILLITIN Z 89 puriss can be used as functional fillers either on their own or combined with extenders or flatting agents.

Information on compliance with certain regulations/recommendations and other safety-related aspects: Product safety information

Fields of application

- emulsion and silicate paints (exterior and interior emulsion paints)
- industrial paints
- wood and foil coatings
- anti-corrosion coatings
- primers and fillers also for the automobile industry
- sealing and embedding compounds
- electrophoretic paints

It stands out for its excellent dispersion properties, moderate yield point and pseudoplasticity with a high solids content and high abrasion resistance.

In unpigmented coatings it achieves good transparency with a minimal yellow tinge.

SILLITIN Z 89 puriss also has advantages in the following instances:
- extremely high requirements on dispersion behavior (paint production without grinding)
- very low coating thickness

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

Metering:
up to 50 % depending on intended application

3. Benefits

- high brightness, high color neutrality
- outstanding dispersion behavior
- good pigment dispersion (spacer effect)
- low abrasiveness
- very low tendency to settle
- soft sediment
- good wet edge strength
- quick drying
- weathering resistance
- breathability
- scratch resistance
- high abrasion resistance
- very good transparency
- slight flatting effect
- complies with the standards on basic foodstuffs of the BfR and FDA

Puriss also provides the following benefits compared with the base SILLITIN Z 89:
- extremely low sieving residues
- excellent dispersion behavior

Comparison of properties

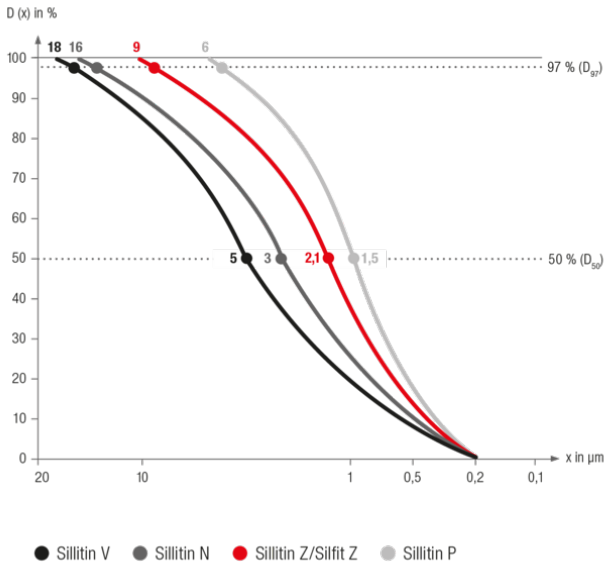
	SILLITIN V	SILLITIN N	SILLITIN Z	SILLITIN P
Viscosity	●	●●	●●●	●●●●
Yield point	●	●●	●●●	●●●●
Sedimentation	●●●●	●●●	●●	●
Flatting	●●●●	●●●	●●	●

● = low ●●●● = high

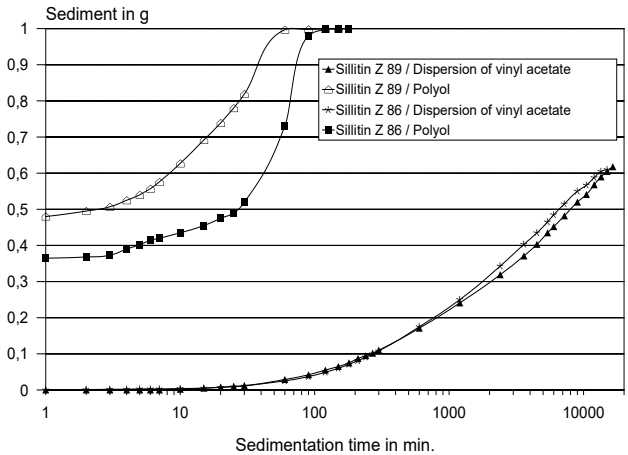
4. Particle size distribution

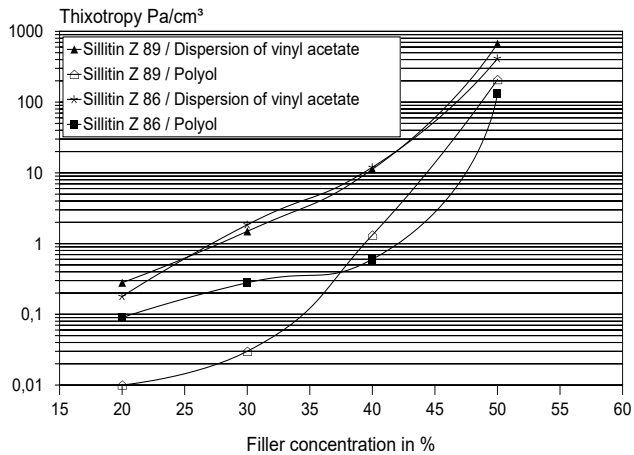
The measurement method for these particle size distributions is based on the Fraunhofer diffraction spectrum. The analyses were carried out with Mastersizer 3000, a laser apparatus of Malvern.

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.



5. Sedimentation and Rheology





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