



## SILLIKOLLOID P 87 (PURISS)

Field of application: Paint & Varnish

### 1. Description

SILLIKOLLOID P 87 and SILLIKOLLOID P 87 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*	94.4 0.8 8.7
Residue > 40 µm		20 mg/kg
Volatile matter at 105 °C		0.5 %
Density		2.6 g/cm <sup>3</sup>
Particle size distribution	D <sub>50</sub> D <sub>97</sub>	1.5 µm 5.6 µm
Surface area BET		14 m <sup>2</sup> /g
Oil absorption		55 g/100 g
Electrical conductivity		80 µS/cm
<b>Puriss grade:</b> As a result of a sophisticated manufacturing process the very low residue is reduced even further from the values given above to the following: In addition the good dispersion behavior is once more improved.	> 40 µm	8 mg/kg

### Packaging

Paper bags		á 25 kg
EVA bags		≤ 15 kg
Big Bags		550 - 900 kg
Bulk		≤ 22 t

The puriss-grade is available in paper bags of 20 kilos only.

### Shelf life

Unlimited if stored properly under dry conditions.



## 2. Applications

In paint and varnish applications SILLIKOLLOID P 87 and SILLIKOLLOID P 87 puriss can be used as functional fillers either on their own or combined with other extenders or flattening agents.

### 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, high yield point and pseudoplasticity with a high solids content and high abrasion resistance.

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

#### **SILLIKOLLOID P 87 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:**

> 7 µm, less in special cases

#### **Metering:**

up to 50 % depending on intended application



### 3. Benefits

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

**Puriss also provides benefits compared with the base material SILLIKOLLOID P 87:**

- extremely low sieving residue
- excellent dispersion behavior

### Comparison of properties

	SILLITIN V	SILLITIN N	SILLITIN Z	SILLIKOLLOID P
Viskosity	•	••	•••	••••
Yield point	•	••	•••	••••
Sedimentation	••••	•••	••	•
Flatting	••••	•••	••	•

• = low    •••• = high



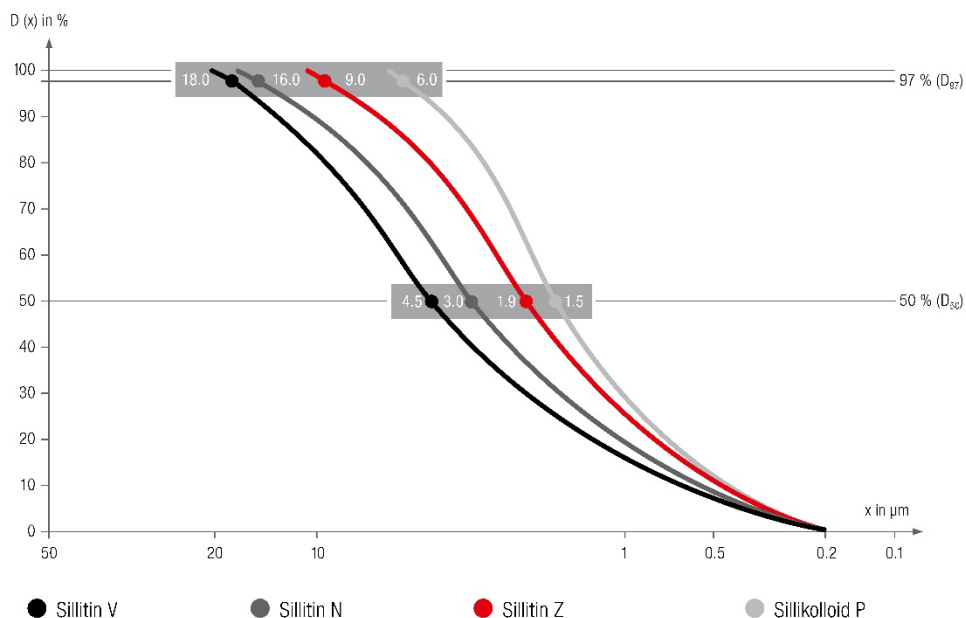
### 4. Particle size distribution

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.

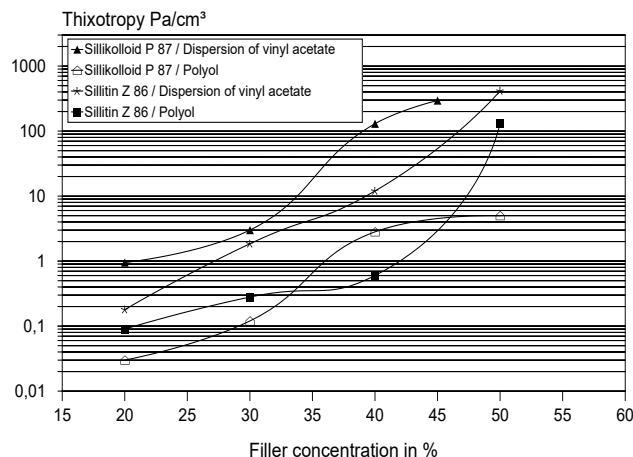
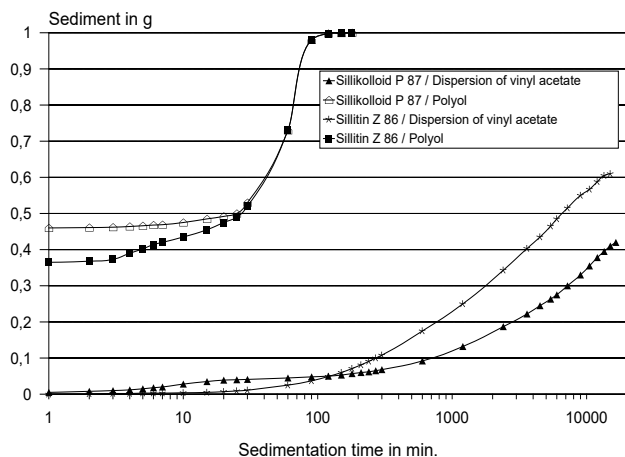
Important:

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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