



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*	94.4
	a*	0.8
	b*	8.7
Residue > 40 µm	20 mg/kg	
Volatile matter at 105 °C	0.5 %	
Densitiy	2.6 g/cm³	
Particle size distribution	D ₅₀	1.5 µm
	D ₉₇	5.6 µm
Surface area BET	14 m²/g	
Oil absorption	55 g/100 g	
Electrical conductivity	80 µS/cm	
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: In addition the good dispersion behavior is once more improved.	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 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, 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	••••	•••	••	•

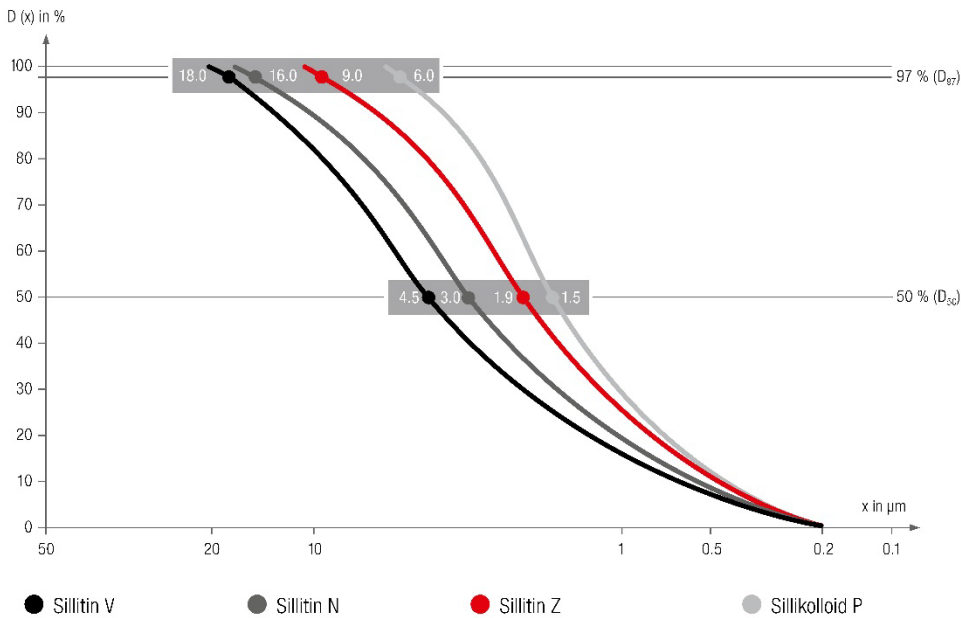
• = low •••• = high



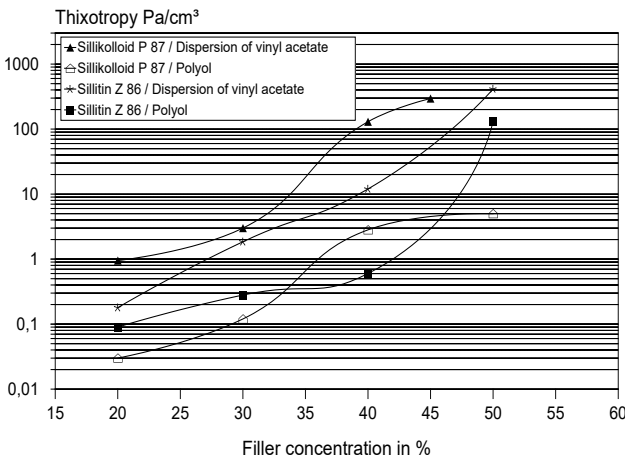
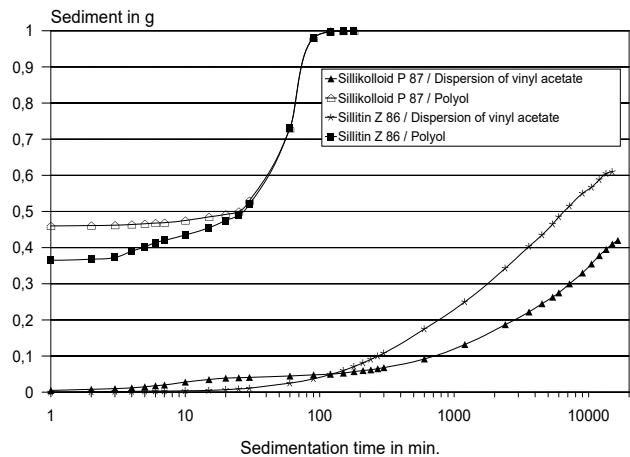
4. Particle size distribution

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



Our applications engineering advice and the information contained in this memorandum are based on experience and are made to the best of our knowledge and belief, they must be regarded however as non-binding advice without guarantee. Working and employment conditions over which we have no control exclude any damage claim arising from the use of our data and recommendations. Furthermore we cannot assume any responsibility for patent infringements, which might result from the use of our information.