HOFFMANN MINERAL
Unternehmensgruppe Hoffmann

SILLIKOLLOID P 87 / SILLIKOLLOID P 87 puriss

TECHNICAL DATA – Field of application: PAINT & VARNISH

1. Description

SILLIKOLLOID P 87 and **SILLIKOLLOID P 87 puriss** is a natural combination of corpuscular, crypto-crystalline and amorphous 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:	82
Brightness Z DIN 53 163:	76
Residue > 40 µm:	20 mg/kg
Residue > 200 µm:	3 mg/kg
Volatile matter at 105 °C:	0.5 %
Electrical conductivity:	65 µS/cm
Density:	2.6 g/cm³
Particle size distribution	
d_{50} :	1.5 µm
d_{97} :	5.6 µm
Surface area BET:	12 m²/g
Oil absorption:	55 g/100 g
Refractive index n:	1.55

Puriss grade:
As a result of a sophisticated manufacturing process the very low sieving residue is reduced even further from the values given above to the following:

> 40 µm:	8 mg/kg
> 200 µm:	1 mg/kg

In addition the good dispersion behavior is once more improved.

Packaging:

Paper bags:*	à 25 kg
PE bags:	≤ 20 kg
EVA bags:	≤ 15 kg
Big Bags:	550 - 800 kg
Bulk:	≤ 22 t

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

Shelf life:
Unlimited if properly stored 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.

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 the following benefits compared with the base material SILLIKOLLOID P 87:

- extremely low sieving residue
- excellent dispersion behavior

Properties:

	V	N	Z	P
Viscosity	*	**	***	****
Yield point	*	**	***	****
Sedimentation	****	***	**	*
Flatting	****	***	**	*

* = low **** = high

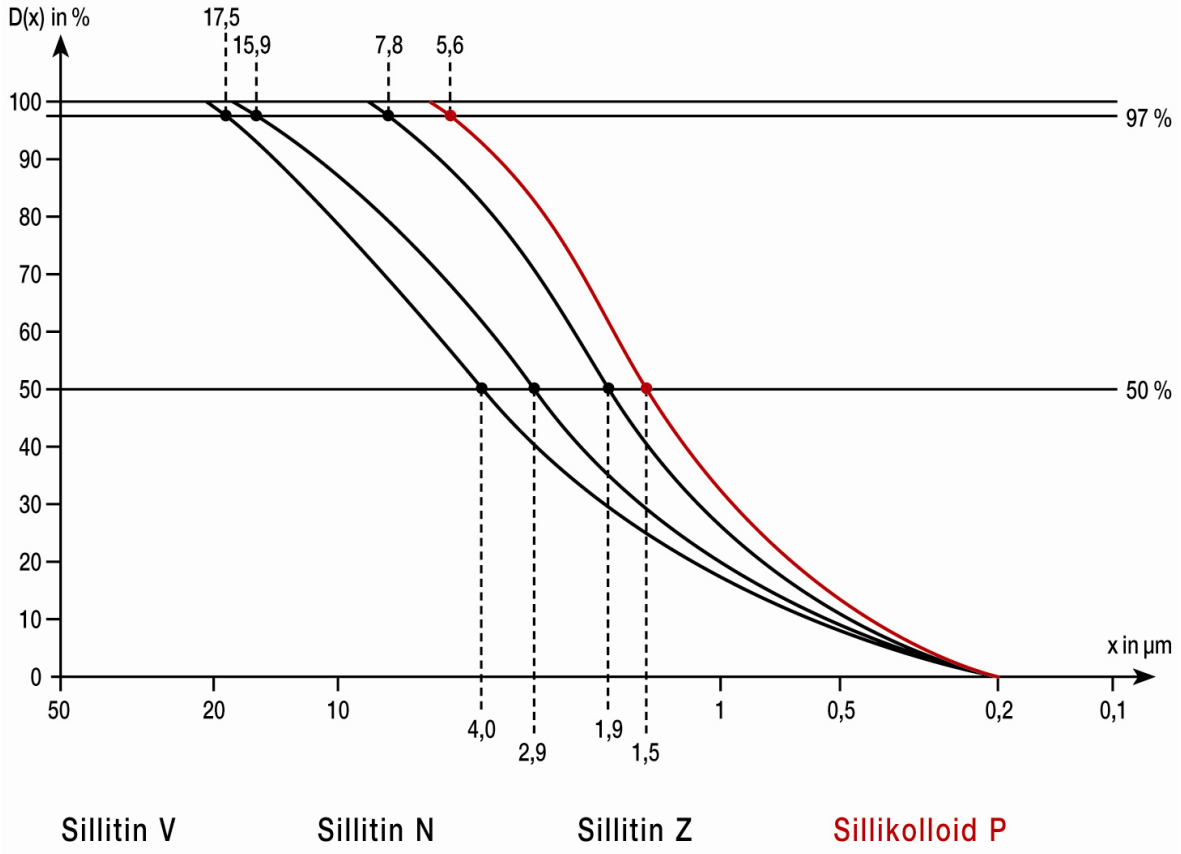
VM-6/5.08/Art.-No. 06847980

HOFFMANN MINERAL GmbH • P.O. Box 14 60 • D-86619 Neuburg (Donau) • Germany • Phone (+49-84 31) 53-0 • Fax (+49-84 31) 53-3 30
Internet: http:\\www.hoffmann-mineral.com • E-mail: info@hoffmann-mineral.com

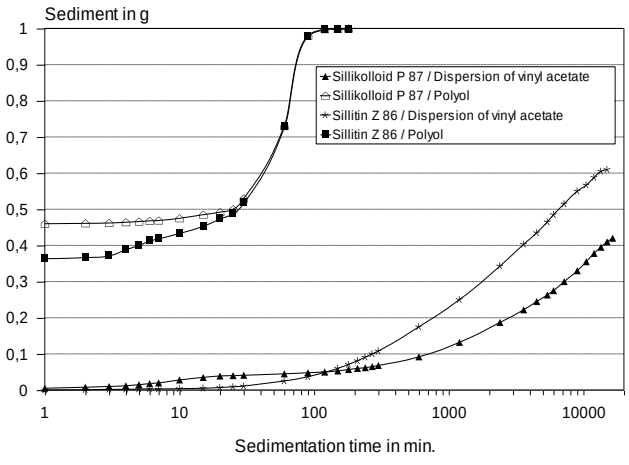
4. Particle size distribution

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

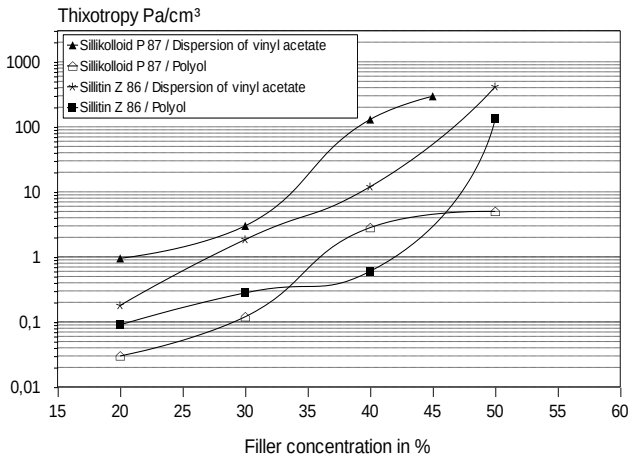
Important: The data on particle size distribution is highly dependent upon the method used, test preparations and the measuring device itself. As a result the values given may not be directly comparable with those provided by another manufacturer.
If you have any queries please contact us direct.



5. Sedimentation



6. 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.