# TECHNICAL DATA SHEET





# **SILLITIN Z 86 (PURISS)**

Field of application: Paint & Varnish

## 1. Description

SILLITIN Z 86 and SILLITIN Z 86 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*	94.0 1.0 9.5
Residue > 40 µm		20 mg/kg
Volatile matter at 105 °C	0.5 %	
Densitiy		2.6 g/cm <sup>3</sup>
Particle size distribution	D <sub>50</sub> D <sub>97</sub>	2.1 μm 9.5 μm
Surface area BET		13 m²/g
Oil absorption		55 g/100 g
Electrical conductivity	80 µS/cm	
Refractive index n	1.55	
<b>Puriss grade:</b> As a result of a sophistical low residue is reduced even to the following: In addition the good dispers	8 mg/kg	
Packaging		
Paper bags	á 25 kg	
EVA bags	≤ 20 kg	
Big Bags	600 - 1000 kg	
Bulk	≤ 22 t	
The puriss-grade is availabl	e in paper bags of 25 kilos only.	

#### Shelf life

Unlimited if stored properly under dry conditions.

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## 2. Applications

In paint and varnish applications SILLITIN Z 86 and SILLITIN Z 86 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: <u>Product safety information</u>

### 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 slight yellow tinge.

### SILLITIN Z 86 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



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# 3. Benefits

- high filling ratio
- 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
- 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 86:

- extremely low sieving residues
- excellent dispersion behavior

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

## **Comparison of properties**

• = low •••• = high



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## 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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