

## TDS - Technical Data Sheet

### Production information

#### Nano-structure of Silica Anti-Caking Grade (ZEO12)

**1.General description:** Silica nano-structure (ZEO12) acts as a very effective anti-caking agent due to its suitable specific surface area and low specific weight, and gives very valuable properties to polymer products. It also prevents the materials from sticking together and becoming lumpy. This grade is produced synthetically under the name of amorphous silicon dioxide (SiO<sub>2</sub>).

**2.Application:** Silica nano-structure (ZEO12) in the polymer industry, to prevent powder particles from sticking together and facilitate the mixing and molding process, in polymer composites to improve mechanical properties and increase wear resistance, and in engineering plastics to increase resistance thermal and chemical are used.

### 3. Specification

Properties	Units	Value
Specific surface area (BET)	m <sup>2</sup> /g	180-200
pH-value (in 5% dispersion in water)	Wt%	6-7
Loss on drying (2h @ 105°C)	Wt%	<5
Particle size agglomerates (D90) (FESEM)	micrometer	<11
Particle size (TEM)	nanometer	15-25
SiO <sub>2</sub> content (based on heated at 1000°C for 2 h)	Wt%	>98
DBP absorption	g/100g	210-230
Tamped density	g/L	100-110
Appearance	Ultra fine, White, Amorphous Powder	
Packaging	10 Kg	
Storage time & place	2 years & closed and dry environment	