

## TDS - Technical Data Sheet

### Production information

#### Grade: ZEO3

**1. General description:** The nano-structure of silica grade ZEO3 acts as a superconductor in the cement and concrete industry. Pososalanic activity of this grade is approximately ten times the size of the output of Ferrosilicon factories. This grade is synthetically produced amorphous silicon dioxide (SiO<sub>2</sub>).

**2. Application:** The nano-structure of silica grade ZEO3 can be enhance the initial strength of the concrete. Also, this grade increase and improve the permeability of concrete, especially in destructive environments. The nano-structure of silica grade ZEO3 is effective in increasing the mechanical strength of porous concrete and prevents the formation and separation of self-compacting concrete and also, it can go up the free flow of cement materials.

### 3. Specification

Properties	Units	Value
Specific surface area (BET)	m <sup>2</sup> /g	130-150
pH-value (in 5% dispersion in water)	Wt%	6-7
Loss on drying (2h @ 105°C)	Wt%	<6
Particle size agglomerates (D90) (FESEM)	micrometer	<20
Particle size (TEM)	nanometer	15-30
SiO <sub>2</sub> content (based on heated at 1000°C for 2 h)	Wt%	>98
DBP absorption	g/100g	220-250
Tamped density	g/L	250-260
Appearance	Fine, White, Amorphous Powder	
Packaging	10 Kg- 15 Kg	
Storage time & place	2 years & closed and dry environment	