

Product

Colloidal Silica (Silica Sol)



Characteristics

Chemical molecular formula: $m\text{SiO}_2 \cdot x\text{H}_2\text{O}$.

Silica sol belongs to colloid. It is odorless, tasteless and nontoxic.

1. Since the colloid grains are minute (10~20nm) and have relatively large specific surface area, the grains themselves are colorless and transparent, so they do not affect the natural color of the materials to be covered.

2. With low viscosity, it can soak the places where water soaks, therefore, it presents excellent dispersion and permeability when being mixed with other substances.

3. When the moisture contained in silica sol are evaporated, the colloid grains firmly adhere to the material surface and the combination of silicon and oxygen is then formed between grains. It is a good adhesive.

Use

1. Used as the cohesive agent for various fireproof materials. It has high bonding strength and high heat-resisting performance (1500-1600°C), etc.

2. Used in coating industry. It makes the paints firm. It also possesses features, such as anti-contamination, dustproof, anti-aging, fireproof, etc.

3. Used in precision casting of thin covers to increase the cover strength, improve the casting smooth finish. Its molding quality is better than that of water glass. It can be used to replace ethyl silicate for molding so as to reduce the costs and help improve the operating conditions.

4. Having large specific surface area, silica sol can be used for making catalyst and as catalyst carrier.

5. Used in paper-making industry. Can be used as the anti-glutinous agent of cellophane, pre-treatment agent of photographic paper, skidproof agent of cement bags, etc.

6. Used as sizing agent in textile industry. When used with oil agent to process wool and rabbit hair, it helps improve the processing of wool and rabbit hair, reduce broken ends, eliminate flyings, thus improve the finished product rate and increase the economic returns.

7. Used as the treatment agent of silicon steel plates, dispersing agent of kinescopes and skidproof agent of floor waxes, etc.

Technical Data

ITEM	Specifications
SiO ₂ , %	40.0-41.0
Na ₂ O, %	0.40
pH value	9.0-10.5
Viscosity (25°C), mPa. s ⁻¹	25.0
Density (25°C), g/cm ³	1.28-1.30
Average particle diameter, nm	10-20

Term of validity: one year for the alkali based.

Packaging: 25kg per plastic container, net.

Conditions for storage and transportation: maintain 0-40 °C during storage and transportation to avoid freezing of exposing to the sun.
