SIO-7212 Waterborne High-Temperature Resistant Silicone Resin

(For Thermal Insulation Coatings)

Overview

SIO-7212 is a silicone resin emulsion specially developed for high-temperature thermal insulation coatings. It is designed for coatings that withstand 200–600°C, offering excellent resistance to chalking and peeling at high temperatures. This product is particularly suitable for insulating coatings used in household appliances and industrial equipment.

Product Features

- Excellent water dilutability, low odor, free from toluene and xylene, compliant with environmental regulations.
- Good stability: enables high-speed dispersion, with excellent acid, alkali, thermal storage, centrifugal, and dilution stability.
- Outstanding film-forming properties, with rapid surface drying at room temperature and excellent wetting and leveling properties.
- Compatible with hollow glass microspheres, hollow ceramic stabilizers, aerogels, and high-silica fibers to create high-temperature-resistant thermal insulation coatings.
- Room-temperature self-drying, achieving hardness within 24 hours.
- Supports thick coatings, maintaining resistance to chalking and peeling even at high temperatures.

Technical Specifications

Property	Unit	Value	Test Method/Standard
Appearance	-	Milky white liquid	Visual Inspection
Emulsifier Ion Type	-	Non-ionic	-
pH Value (20°C)	-	8–9	pH Test Paper
Solid Content	wt%	35	ASTM D1630
Dynamic Viscosity	Cp	10–20	Brookfield
Density	kg/L	1.02–1.11	ASTM D4052
Curing Conditions	-	Room temperature self-drying, achieves hardness within 24 hours	-

Applications

- Insulating coatings for household appliances, cookware, stoves, fireplaces, ovens, kilns, and other thermal insulation applications.

Usage Recommendations

1. Directly mix with powder materials for dispersion.
2. For enhanced decorative and functional properties, apply high-temperature-resistant topcoats or reflective coatings over the thermal insulation layer.

Packaging and Storage

- **Packaging**: Available in 50 kg plastic drums.
- **Storage Conditions**: Store in a ventilated, cool location above 0°C and below 40°C. Transport as a non-hazardous product.

Shelf Life

- Store in sealed containers for up to 6 months.
- **Note**: The "Best Before" date is marked on the product label. While exceeding this date does not necessarily mean the product is unusable, it is recommended to recheck its properties to ensure quality before further use.