MANTA

Technical Data Sheet

Version: 1.0

Manta WS513

Silicone Hydrophobizing Additive for Insulation Materials

Description

Manta WS513 is a solvent-free, highly efficient aqueous emulsion of functional polysiloxanes. It is specifically designed as a mass hydrophobic additive for phenolic resin binders used in the insulation industry.
Performance equivalent to Wacker SILRES® BS 5137.

Typical Physical Properties

Manta Code:	WS513
Chemical Name:	Functional polysiloxane aqueous emulsion
Appearance:	Milky white liquid
Active Content(%):	approx. 50
Density (20°C, g/cm³):	approx. 1

Properties

- Exceptional Hydrophobicity: Imparts outstanding, long-lasting water repellency to the finished insulation materials.
- Highly Breathable: Maintains uncompromised water vapor permeability within the mineral fiber network.
- Good Compatibility: Compatible with most standard phenolic resin binders; a compatibility test with the specific binder mix is required in each plant.
- Process Friendly: Can be directly incorporated into the phenolic resin mix without requiring complex emulsification steps.

Application

Manta WS513 is a dedicated water-repellent additive for the industrial manufacturing of bonded mineral wool products. It is highly recommended for incorporating into the binder systems of:

1. Rock wool (stone wool) insulation boards and rolls.
2. Glass wool insulation products.
3. Other mineral-fiber-based acoustic and thermal insulation materials.

Application Method

- Mixing Procedure: Manta WS513 should be added directly into the formulated phenolic resin binder under continuous, gentle agitation.
- Recommended Dosage: The optimal addition rate is between 0.5% and 1.0% by weight, calculated strictly relative to the total mass of the phenolic resin binder.

Packaging

In 20-25kg/ Plastic drum, 180-200kg/Iron drum

Safety and Storage

Temperature Sensitivity: Manta WS513 is an aqueous emulsion sensitive to extreme temperatures. It must be stored indoors and strictly protected from frost and excessive heat.
Storage Range: Storage temperatures must be maintained between 5°C and 40°C. Exposure to temperatures outside this range may cause irreversible emulsion breakage (phase separation).
Quality Verification: In the event of suspected frost or heat damage, the viability and homogeneity of the product must be thoroughly verified prior to application.

Shelf Life: 12 months when stored properly in original, unopened containers. It's a non-hazardous substance for transport.

Contact Information

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