Technical Data Sheet

Silsan® HSB

Silicone resin binder

Product description

Silsan® HSB is used as a co-binder in aqueous, breathable silicone resin coatings such as silicone resin paints and silicone resin plasters. Silsan® HSB is a solvent free silicone resin emulsion which can be diluted in water and which forms the binding system of the coating together with a suitable polymer emulsion. It thus forms the typical silicone resin character of the coating.

The advantages of silicone resin paints and plasters compared to other aqueous coating systems are:

- Exceptional water repellence in combination with a high water vapour and CO_2 permeability.
- Good resistance to weathering and UV light in comparison to pure dispersion based coatings.
- A natural matt, microporous appearance, making it well suited for interior use.
- Minimal soiling with exterior applications.
- Requires no special priming or substrate conditions, thus perfectly suited for renovations.

After evaporation of the water, Silsan® HSB forms a hard silicone resin film on the surface of the coating. This hard film leads to a greatly reduced dirt pick-up of the porous coating surface.

Furthermore, the wet-scrub resistance (tested according to DIN ISO 11998) is significantly improved.

By using Silsan® HSB as a co-binder in aqueous coatings, high water vapour permeability (sd value) in combination with low water absorption (w_{24} value) is achieved.

According to DIN EN 1062-1, a w_{24} value of 0.1 $kg/m^2 h^{0.5}$ or less is required after the third cycle of watering in order to graduate the coating to class W_3 (low water absorption). By using Silsan® HSB, this value is often already achieved after the first cycle of watering.

Application

The quantity of Silsan® HSB required depends on the formulation of the coating system.

The following levels are recommended as a guideline:

Silicone resin paints:	6 to 12%
Silicone resin plasters:	4 to 6%

(percentages as a share of total final mass)

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Storage stability

The packages must not be exposed to direct sunlight or frost.
A storage temperature within a range of + 5 to + 25 °C must be guaranteed.

In originally sealed containers, Silsan® HSB may be stored for maximum of 12 months after the date of delivery.

Product properties of Silsan® HSB

Properties	Value
Composition	emulsion of silicone resins
Appearance	viscous, milky-white
Active content	approx. 50 %
Type of solvent	solvent-free
Solubility	water dilutable
Flashpoint	-
Viscosity (at 20 °C)	>320<800 cSt
Density (at 20°C)	approx. 1.0 g/ccm
pH value	7 – 9
Packaging	plastic canisters, plastic drums*, IBC
Storage stability	approx. 12 months at + 5 to + 25 °C

Note:
These figures are only intended as a guide and should not be used in preparing specifications.

** Packaging and transport information:*

For reasons of safety during the transportation of plastic drums, please observe the following packaging units when placing your order:

55 kg plastic drums: 6 x 55 kg or 12 x 55 kg on a pallet, wrapped in cardboard
145 kg plastic drums: 5 x 145 kg on a pallet

Special storage and recommendations for use:

- Store the product in a cool, dark place
- In order to prevent contamination with bacteria and fungus spores from the ambient air, the containers should only be opened to remove the product required and be subsequently closed once more. In particular when using plastic drums, see that no dust or dirt from the atmosphere falls into the open drum.
  Close the drum immediately after the product has been taken out.
- When a dipper is used, it must be cleaned thoroughly before immersion.
- Once the containers have been opened, use up the complete contents as quickly as possible.

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