Technical Data Sheet

Silsan® HSB-GS

Silicone Resin Binder

Product description

Silsan® HSB-GS is used as a co-binder in aqueous, breathable silicone resin coatings such as silicone resin paints and silicone resin plasters. Silsan® HSB-GS 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.

Compared to the silicone resin binder Silsan® HSB, Silsan® HSB-GS is characterized by a reinforced silicone resin structure with an accelerated wash-out of the emulsifiers which has positive effects especially in formulations which exhibit difficulties to be made water repellent.

This can be seen in higher durability of the silicone resin film on the one hand and on much lower water absorption of the coating made with Silsan® HSB-GS on the other, whereby, high water vapour permeability, typically for silicone resin systems, is achieved.

Silsan® HSB-GS 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.

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-GS, this value is often already achieved after the first cycles of watering.

Application

The quantity of Silsan® HSB-GS 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)

Graf Chemicals GmbH
Prof.-Max-Lange-Platz 4
83646 Bad Tölz - Germany

Phone: +49 (0) 8041 79285-0
e-mail: info@graf-chemicals.com
www.graf-chemicals.com

Storage stability

The packages must not be exposed to direct sunlight and must be protected from heat.

If subjected to frost, the product will become unfit for use.
We recommend a storage temperature within a range of + 5 to + 25 °C.

In originally sealed containers, Silsan® HSB-GS may be stored approx. 12 months after the date of delivery.

Even after shelf life has expired, the product isn't necessarily unfit for use. However, in such case, we highly recommend to inspect the product regarding a potential infestation of bacteria and fungus.

Product properties of Silsan® HSB-GS

Properties	Value
Composition	emulsion of silicone resins
Appearance	viscous, milky-white, fine dispersion
Active content	approx. 50 %
Type of solvent	solvent-free
Solubility	water soluble
Flashpoint	n.a.
Viscosity (at 20 °C)	>250<500 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 Unfit for use after frost exposure

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
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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