

Technical Data Sheet

Silsan[®] WR 3000

Silicone Resin Emulsion

Product description

Silsan[®] WR 3000 is a silicone resin emulsion based on polysiloxanes and silicone resins for the manufacturing of aqueous, water repellent silicone resin paints and plasters.

Silsan[®] WR 3000 provides both good binding characteristics as well as excellent water repellency. It is used as an “all in one” composite which imparts to the formulation, when used together with a suitable polymer emulsion, the typically positive properties of silicone resin paints and plasters. These are:

- Exceptional water repellence in combination with high water vapour and CO₂ permeability.
- Good resistance to weathering and UV light in comparison to pure dispersion based coatings.
- A natural matte, microporous appearance, making it well suited for interior use.
- Requires no special priming or substrate conditions, so perfectly suited for renovations.

The new, particularly effective silicone resin structure of Silsan[®] WR 3000 enables the formulation of cost effective silicone resin coatings with only one single silicone product. Coating systems can thus be formulated with quantities of Silsan[®] WR 3000 below 5% of which nonetheless fulfill the stringent demands

of DIN EN 1062-1 which requires minimal water absorption (Class W₃ – less than 0,1 kg/m² h^{0,5}). In most cases, it is not necessary to use other water repellent silicone products apart from Silsan[®] WR 3000 in order to make formulations highly water repellent.

Furthermore, Silsan[®] WR 3000 exhibits the following properties:

- aqueous emulsion, solvent-free
- alkali stable
- based on cross-linking polysiloxanes with a resin-like character
- film forming
- early rain resistant
- exceptional water repellent properties at low quantities (less than 5 %)

Application

Silsan[®] WR 3000 has an active content of about 50 %. The product is added to the aqueous coating formulations during or after their manufacturing process. Due to its water thinnable character, Silsan[®] WR 3000 can easily be incorporated into aqueous formulations with no high shear force necessary.

The quantity of Silsan® WR 3000 required depends on the coating system to be formulated. The following guiding levels are recommended:

Silicone resin facade paints: 3 to 7 %
Silicone resin interior paints: 1 to 3 %
Silicone resin plasters: 2 to 5 %

(each related to the total formulation)

Depending on the type of the coating system and relevant to its total formulation, 10 to 20% of a suitable polymer dispersion must be added.

Storage

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® WR 3000 may be stored for maximum of 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® WR 3000

Properties	Value
Composition	emulsion based on polysiloxanes and silicone resins
Appearance	viscous, milky-white, fine dispersed
Active content	approx. 50 %
Type of solvent	solvent free
Solubility	water dilutable
Flash point	n.a.
Viscosity (at 20 °C)	<500 cSt
Density (at 20°C)	approx. 1,0 g/ccm
pH value	>7 <9
Packaging	IBC, plastic drums*, plastic canisters
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
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.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials in order to provide for local processing conditions over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.