

SILRES® REN 80

SILICONE RESIN SOLUTION

Product description

SILRES® REN 80 is a methyl phenyl group containing silicone resin solution in xylene.

Properties

SILRES® REN 80 is typically used in heat resistant coatings. It combines outstanding heat resistance and weatherability. With proper coating formulation, thermal stability up to 650°C (1200°F) can be achieved in combination with suitable temperature stable pigments and fillers.

Special features

- very good balance of flexibility, hardness, heat resistance and curing speed
- high viscosity
- medium hardness
- coatings dry tack-free at room temperature
- good compatibility with organic resins (but preferably used as a sole binder)
- excellent hydrophobicity and corrosion-protection

Application

SILRES® REN 80 is suitable for all kinds of heat-resistant paints. It is an excellent choice for (anti-corrosion) coatings on mufflers, exhaust systems, engine parts, boilers, furnaces, ovens and oven inserts, chimneys, barbeques and electric and gas heaters, incinerators.

At temperatures above 250°C (480°F) the organic groups of silicone resins start to degrade. After all the organic parts of the silicone resin have been pyrolytically decomposed, the product that remains moves to an inorganic stoichiometric composition of (SiO₂)_n. It is this layer which firmly binds pigments and fillers to the coated substrate.

Processing

Detailed guide formulations are available on request.

- Any heat-stable inorganic, white, silver, black and color, pigments can be used; aluminium pigments provide the best heatresistance up to 600°C (1100°F), black pigments up to 500°C (930°F).
- Mica and talc can be used as fillers.
- Ensure appropriate dispersion of pigments and fillers in the paint.
- Sand-blasting and degreasing of the substrate is recommended.
- Painting can be done by spraying, dipping and brushing.
- Dries tack-free at room-temperature, provides temporary corrosion protection.
- Optimum mechanical properties and resistance to oil are obtained after baking (e.g. 200°C/1h).
- Recommended dry film thickness is between 15 and 25µm.

Storage

SILRES® REN 80 must be stored in tightly closed original containers with exclusion of moisture. Contact with tin (e.g. with improper metal containers) or moisture will cause gelation.

The 'Best use before end' date of each batch is shown on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Packaging

- 25kg steel can
- 200kg steel drum

Additional information

FDA/BfR Status

The binder of SILRES® REN 80 can be used in compliance with BfR recommendation XV. Silicones and FDA Regulation 21 CFR 175.300 Chapter (b) (3) (xxviii) (a) under the following provisions: Complete

curing of the resin and complete evaporation of the solvent. Extractive limits given in FDA Regulation 21 CFR 175.300 Chapter (c) must be met.

Please ask for detailed information.

Safety notes

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site <http://www.wacker.com>.

Product data

Typical general characteristics	Inspection Method	Value
Appearance		clear, colorless to slightly yellow solution
solvent		xylene
Solid content	1h / 200°C (392°F)	82 ± 2 wt%
Viscosity, dynamic at 25 °C	DIN 53019	approx. 2000 mPa.s
Density at 20 °C	DIN 51757	1,12 g/cm ³
Flash point	DIN 51755	25 °C
Ignition temperature (liquids)	DIN 51794	485 °C

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

The data presented in this medium 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 medium should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The information provided by us does 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 product for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001

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For technical, quality, or product safety questions, please contact:

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