

# SILRES<sup>®</sup> REN 70-M



## Silicone Resins

SILRES<sup>®</sup> REN 70-M is a hard silanol-functional methyl phenyl silicone resin supplied as app. 70 wt.% solution in 1-methoxy-2-propylacetate.

Typical application of SILRES<sup>®</sup> REN 70-M is the use as binder for heat-resistant coatings, especially for those which shall not contain xylene.

## Properties

SILRES<sup>®</sup> REN 70-M offers the following properties:

- Silicone resin with medium molecular weight and silanol functionality
- Combination of hardness, heat resistance, tack-free drying at room temperature and high reactivity
- Solvent 1-methoxy-2-propylacetate instead of xylene
- High solids content offers more formulation options
- medium viscosity
- Offers hydrophobicity and anti-corrosive properties

# Technical data

## General Characteristics

Property	Condition	Value	Method
Appearance	-	colorless to slightly yellow	-
Density	23 °C   1013 hPa	1.18 g/cm <sup>3</sup>	DIN 51757
Flash point	-	53 °C	ISO 13736
Solid content of solution (Gravimetric)	200 °C   1 h	66 - 70 %	PV 04051
Viscosity, dynamic	25 °C	approx. 400 - 1200 mPa·s	DIN 53019

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

All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

Store in a dry and cool place.

Protect against moisture.

## Applications

- Heat-Resistant Coatings
- Industrial Coatings

## Application details

SILRES® REN 70-M is mainly used as binder for coatings. It combines outstanding heat resistance and weatherability, dries to tack-free film at room temperature.

### Heat-resistant Coatings

SILRES® REN 70-M is especially suitable for all kinds of heat-resistant paints. It is an excellent choice for (anti-corrosion) coatings on fireplaces, mufflers, exhaust systems, engine parts, boilers, furnaces, ovens and oven inserts, chimneys, barbecues, electric/gas heaters, incinerators.

High-heat resistant coating formulations with SILRES® REN 70-M in combination with suitable temperature stable pigments and fillers can achieve thermal stability up to 650°C (1100°F). Aluminum pigments can be used for silver/grey colors and black pigments like iron manganese oxides or copper chromite black spinels for dark black coatings. Platelet-shaped inorganic fillers/extenders like mica or talc are suitable for such formulations. The pigments and fillers must be properly dispersed in the paint. Degreasing/Cleaning and sandblasting of the substrate are recommended for obtaining optimum corrosion resistance and heat stability on metal surfaces. The adhesion will always depend on the specific coating formulation, too. Coating application can be done by spraying, dipping and brushing.

Coatings made with SILRES® REN 70-M dry at room temperature to tack-free films which already provide temporary corrosion protection. A initial baking step at 200°C/1h has proven to effectively reduce the risk of cracking at extreme temperatures.

This binder chemically crosslinks at temperatures > 200°C due to its silanol functionality. Complete crosslinking can be achieved under these conditions:

- 250°C/30 min
- 180°C/20 min with catalyst (two component system)

Potential curing catalysts are all kinds of substances which are known to facilitate SiOH hydrolysis and condensation reactions. Above mentioned condition is achieved with GENIOSIL® GF 91 as catalyst. It is recommended to add the catalyst as second component immediately before use/coating application (two component system).

Formulation examples are available on request.

Information on the current BfR/FDA-status is available on request.

## Packaging and storage

### Packaging

- 200 kg drum
- 950 kg IBC

### Storage

SILRES® REN 70-M 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.

## 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>.

## QR Code SILRES® REN 70-M



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

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