

# POWERSIL® 3100 MH

## High Consistency Silicone Rubber (HCR)

POWERSIL® 3100 MH silicone rubber is a one-component, ready to use, addition-curing compound that cures to an electrical insulating, highly erosion resistive silicone elastomer.

POWERSIL® 3100 MH shows fast curing in comparison to conventional silicone rubber. Cure time is reduced by (30...50) % depending on the wall thickness and on the available machinery and runner system.

No peroxide decomposition products are released while curing. Due to the curing system there is no risk for curing inhibition by oxygen.

## Properties

- very good arc resistance
- suitable dielectric properties
- good mechanical properties

## Specific features

- Excellent hydrophobicity behavior
- Resistant to tracking and erosion
- Two-component

## Technical data

### Properties Uncured

Property	Condition	Value	Method
Density	-	1.55 g/cm <sup>3</sup>	DIN EN ISO 1183-1 A
Appearance	-	light gray	-

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

### Properties Cured

Cure conditions: 15 min / 165°C in press

Property	Condition	Value	Method
Hardness Shore A	-	70	DIN ISO 48-4
Tensile strength	-	4.5 N/mm <sup>2</sup>	ISO 37 type 1
Elongation at break	-	350 %	ISO 37 type 1
Volume resistivity	-	10 <sup>14</sup> Ohmcm	IEC 62631-3-1
Permittivity	50 Hz	3.9	IEC 62631-2-1
Dissipation factor	50 Hz	2 x 10 <sup>-3</sup>	IEC 62631-2-1
Dielectric strength	-	18 kV/mm	IEC 60243-1
Tracking resistance	-	1A 4.5	IEC 60587
Arc resistance	-	> 300 s	IEC 61621
Flammability	-	FV 0	IEC 60695-11-10
Tear strength	-	20 N/mm	ASTM D 624 B

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.

## Applications

- Arresters
- Insulators

## Application details

POWERSIL® 3100 MH is the addition curing silicone rubber of choice to manufacture all types of electrical insulating equipment for outdoor use, especially all types of composite insulators, arrester housings, bushings etc.

## Processing

POWERSIL® 3100 MH cures rapidly at an elevated mold temperature (> 140 °C). It is designed to be used with sophisticated injection molding machines and molds.

For detailed information about processing please refer to the brochure ELASTOSIL® HTV-Silicone Rubber - Processing.

To achieve a good bonding between the typically used materials for electrical insulating equipment and POWERSIL® 3100 MH the primer G 800 should be used. It is available from Wacker Chemie AG as well.

The used catalyst system can be deactivated by the influence of some chemical products (e.g. amine derivatives, sulphur products, tin compounds and phosphorous products). Please avoid contact to these chemical products.

## Packaging and storage

### Packaging

POWERSIL® 3100 MH is commercially available in 700 kg cardboard boxes. Packaging in 20 kg cardboard boxes is available for sampling.

### Storage

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.

#### Caution

Permanent transportation and storage at elevated temperature leads to a partly crosslinking and makes the material unusable.

## 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 POWERSIL® 3100 MH



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

**Wacker Chemie AG**, Hanns-Seidel-Platz 4, 81737 Munich, Germany  
info@wacker.com, www.wacker.com

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.