

WACKER

CREATING TOMORROW'S SOLUTIONS

POWERSIL®

POWERSIL® PERFORMANCE
FOR SILICONE RESINS

FILLED SILICONE RESIN COMPOUNDS – FOR VACUUM CASTING APPLICATIONS

POWERSIL® silicone resin introduces an all new class of silicone binder. The new material is solvent-free, has a low viscosity and is ready to use. Because it can be accelerated by adding a small amount of a standard silicone accelerator, this addition-curing material does not contain any chemicals of concern.

Thanks to the Si-O network, in which the bonding energy is high relative to the C-C backbone, the material is expected to exhibit advantageous macroscopic properties.

Resistance to elevated temperatures, to the effects of weathering and UV radiation, and to other oxidative stresses will likely be outstanding depending on the final formulation selected. As a result, the product is expected to be perfectly suitable for applications such as outdoor electrical equipment.

Cast parts made of POWERSIL® silicone resin exhibit ideal dielectric behavior and are durable, sustainable and economical. In close cooperation with our valued customers, we are developing new applications and expanding existing ones for which binders used to date are rarely sufficient.

POWERSIL® silicone resin represents an ideal binder for manufacturing industrial cast parts and for use in the electronics and in electrical insulation (T&D).



PRODUCT OVERVIEW – SILICONE RESINS FOR ELECTRICAL INSULATION, MOLDED PARTS

One of the first products to emerge so far is **POWERSIL® Resin 700**, a low viscosity, solvent free, addition-curing silicone resin that is applied as the primary binder material for experimental compound formulations.

The thermal stability of the cured materials is very high, yielding molded parts capable of withstanding the elements.

| Typical Properties of Resin | |
|--|--------------------------|
| Appearance | Clear, transparent fluid |
| Viscosity [mPas] | 1,000 |
| Pot life of resin [months] | > 12 |
| Mixing ratio with accelerator | 99:1 |
| Pot life of activated mixture at room temperature [min.] | > 120 |
| Typical gel time at 120 °C [s] | 150 |

| Typical Properties of Cured and Postcured Resin Without Filler | |
|--|--------------|
| Hardness [Shore D] | 60 |
| Thermal class | R and better |
| Dielectric dissipation factor | 0.02 |
| Relative permittivity | 2.5 |

Application

Compounds made with POWERSIL® Resin 700 are suitable for casting applications and may contain powdery fillers, fibers, fabric and other filling media. Prepared mixtures are heat cured, and the easily demolded parts achieve their final properties through postcuring.

For More Information Please Contact:

Andrei Szabo

Marketing Manager
andrei.szabo@wacker.com

Dr. Jens Lambrecht

Application Engineering
jens.lambrecht@wacker.com



The WACKER logo is displayed in a bold, black, sans-serif font within a white rectangular box with a thin black border. The background of the entire page is a close-up photograph of a white, multi-cavity mold, likely used for casting, with a soft, diffused light source from the right creating a gradient across the scene.

Wacker Chemie AG
Hanns-Seidel-Platz 4
81737 München, Germany
Tel. +49 89 6279-1741
info@wacker.com

www.wacker.com

www.wacker.com/socialmedia



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