

CIRCALOK® 6716 SILICONE RESIN

Technical Data Sheet

Circalok® 6716 silicone resin is formulated for use with Circalok 6733 hardener to create a two-component, solvent-free RTV silicone system. The silicone system is ideal for potting and encapsulating both low- and high-voltage electrical and electronic assemblies.

Features and Benefits

Low Stress: exhibits low shrinkage and stress on components as it cures.

Versatile: room temperature curing formulation is not subject to hardener poisoning.

Excellent Dielectric Properties: cured system provides high electrical resistivity and dielectric strength.

No Exotherm: cures in deep sections without exotherm.

Broad Temperature Range: can be used on parts and devices that experience continuous operating temperatures from -60°C to +205°C.

Application

Mixing: Thoroughly stir Circalok 6716 resin and Circalok 6733 hardener individually in each separate shipping container to ensure uniform dispersion. Transfer amount of Circalok 6716 resin needed to a clean container and add Circalok 6733 hardener at a 100:2.5 ratio, by weight.

Thoroughly mix silicone system to ensure catalyzation. Be careful not to whip excessive air into the silicone system. If necessary, remove entrapped air by evacuating material prior to pouring.

Applying: Apply material using automatic meter/mix/dispense equipment.

Curing: Allow silicone to cure for 12-16 hours at 25°C. This time-at-temperature profile refers to the time the material should be allowed to cure once it reaches the target temperature. Allowance should be made for oven ramp rates, parts with large thermal mass and other circumstances that may delay material reaching the target temperature.

Typical Properties*

Appearance	Black Liquid
Viscosity, cP @ 25°C	10,000
Specific Gravity @ 25°C	1.40

*Data is typical and not to be used for specification purposes.

Typical Properties* of Resin Mixed with Hardener

Circalok 6733

Mix Ratio by Weight, Resin to Hardener	100:2.5
Working Life, minutes @ 25°C	45
Cure Time, hours @ 25°C	12 - 16

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Typical Cured Properties*

Circalok 6733

Thermal Conductivity, W/m-K Hot Disc Transient Method, ISO 22007-2	0.3
Coefficient of Thermal Expansion, ppm/°C	110
Hardness Shore A	45
Tensile Strength, MPa (psi) @ 25°C	0.97 (140)
Elongation at Break, %	200
Volume Resistivity, ohm-cm @ 25°C	1 x 10 ¹⁵
Dielectric Strength, kV/mm (V/mil) ASTM D 149	19.7 (500)
Dielectric Constant @ 25°C ASTM D 150	3.5
Dissipation Factor @ 25°C ASTM D 150	0.01

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Shelf Life/Storage

Shelf life is six months when stored at 25°C in original, unopened container.

Cautionary Information

Before using this or any Parker Lord product, refer to the Safety Data Sheet (SDS) and label for safe use and handling instructions.

For industrial/commercial use only. Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

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