

Circalok™ 6744 Silicone Encapsulant

Technical Data Sheet

Circalok™ 6744 encapsulant is a two-component silicone system for use in applications requiring a low viscosity, flame retardant encapsulating material.

Features and Benefits:

Low Viscosity – maintains low viscosity for complete and void-free encapsulation.

Broad Temperature Range – can be used on parts and devices that experience operating temperatures from -55°C to +205°C.

Application:

Mixing – Thoroughly mix each component prior to combining resin and hardener. Mix Circalok 6744 A resin with Circalok 6744 B hardener at a 1:1 ratio, by weight or volume. Automatic meter/mix/dispense equipment may be used for high volume production.

Unless a closed-chamber mechanical mixer is used, air may be introduced into the encapsulant system either during mixing or when catalyzing the mixture. Electrical properties of the silicone encapsulant are best when air bubbles and voids are minimized. Therefore, in extremely high voltage or other critical applications, vacuuming may be appropriate.

Applying – Apply encapsulant using handheld cartridges or automatic meter/mix/dispense equipment.

Avoid applying Circalok 6744 encapsulant to surfaces that contain cure inhibiting ingredients, such as amines, sulfur, or tin salts. If bonding surface is in question, apply a test patch of Circalok 6744 encapsulant to the surface and allow it to set for the normal cure time.

Curing – Allow encapsulant to cure for 45 minutes at 65°C, or for 2 hours at room temperature. 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.

Shelf Life/Storage

Shelf life of each component is six months when stored at 25°C in original, unopened container. The material must be periodically rotated within its container to maintain maximum shelf life. Settling will occur if not mixed.

Typical Properties*

	6744 A Resin	6744 B Hardener	Mixed
Appearance	Black Liquid	Gray Liquid	Black Liquid
Viscosity, cP @ 25°C	3000	2500	2700
Specific Gravity	1.35	1.30	1.35
Working Life, minutes @ 25°C	–	–	15

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



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Typical Cured Properties*

Hardness Shore A	55
Tensile Strength, MPa (psi) ASTM D 412	2.76 (400)
Elongation at Break, % ASTM D 412	100
Volume Resistivity, ohm-cm @ 25°C ASTM D 257	1×10^{15}
Dielectric Strength, kV/mm (V/mil)	17.7 (450)
Dielectric Constant 100 Hz, ASTM D 150	3.2
Dissipation Factor 100 Hz, ASTM D 150	0.005

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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.

Values stated in this document represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact the Customer Support Center.

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