

Circalok™ 6414 Urethane Encapsulant

Technical Data Sheet

OBSOLETE

Circalok™ 6414 urethane encapsulant is a two-component system designed to provide excellent physical properties for encapsulating and casting applications.

Features and Benefits:

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

Environmentally Resistant – formulated for applications requiring exceptional toughness and excellent abrasion resistance.

Easy to Use – provides easy room-temperature mixing, pouring and curing.

Application:

Mixing – Mix Circalok 6414 A resin with Circalok 6414 B hardener at a 20:10 ratio, by weight, until uniform in consistency. Automatic meter/mix/dispense equipment may be used for high volume production.

Applying – Pour encapsulant directly from mixing container on to application, or apply using automatic meter/mix/dispense equipment.

Curing – Cure encapsulant using one of the following cure schedules:

- one hour at 25°C, followed by 16 hours at 60°C;
- one hour at 25°C, followed by 4 hours at 100°C; or
- 7 days 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.

Shelf Life/Storage

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

Typical Properties*

	6414 A Resin	6414 B Hardener	Mixed
Appearance	Clear Liquid	Yellow Liquid	Clear Paste
Viscosity, cP @ 25°C	7000	100	3200
Specific Gravity	0.98	1.03	1.01
Gel Time, minutes @ 25°C	–	–	45
Working Life, minutes @ 25°C	–	–	25-35

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



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Typical Cured Properties*

Hardness Shore A	40
Tensile Strength, MPa (psi) @ 25°C	0.34 (2700)
Elongation at Break, %	600
Volume Resistivity, ohm-cm @ 25°C	1×10^{12}
Dielectric Strength, kV/mm (V/mil) ASTM D 149	>23.6 (>600)
Dielectric Constant @ 25°C 10 kHz, ASTM D 150	6.1
Dissipation Factor @ 25°C 10 kHz, ASTM D 150	0.02

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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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OD DS4300 09/20 Rev.0



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