

LORD® JMC-700K Protection Coating

Technical Data Sheet

LORD® JMC-700K coating is a thermal-cure epoxy resin specially designed for thin film coating of heat sinks and magnets. LORD JMC-700K coating provides electrical insulation, heat resistance, and oil resistance with a single-coat application. This coating can be used in a variety of automotive applications including cooling plates, heat sinks and motor magnets used in electric vehicles, as well as automotive parts and industrial machine applications.

Features and Benefits:

Good Adhesion – provides strong adhesion to substrate.

Broad Temperature Range – can be used on parts and devices that experience operating temperatures from -40°C to +180°C.

Environmentally Resistant – provides excellent resistance to heat, oil and moisture.

Heat Resistance test 180°C x 1500 hr	Pass
Cycle test -40°C to +170°C, 1500 cycles	Pass
Oil Resistance test 150°C x 2000 hr	Pass
Humidity Resistance test 85°C, 85% RH x 2000 hr	Pass

Application:

Surface Preparation – Thoroughly clean surfaces prior to coating application to remove all dirt, oil, grease and oxides.

Mixing – Thoroughly stir coating before use. If dilution is needed, use LORD JMC-700ST thinner or methyl ethyl ketone (MEK) as diluent.

Applying – Apply coating by dip or spray methods. Regardless of application method, recommended dry film thickness of LORD JMC-700K coating is 10-100 micron.

Curing – Allow coating to cure for 30 minutes at 180°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 the material actually reaching the target temperature.

Shelf Life/Storage:

Shelf life is one year from date of manufacture when stored in a well ventilated area at 21-27°C in original, unopened container.

Typical Properties*

Appearance	Black Liquid
Viscosity, mPa·s @ 25°C	6000
Specific Gravity	1.07
Solids Content by Weight, %	39.5

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



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Typical Cured Properties*	
Thermal Conductivity, W/m·K	0.52
Volume Resistivity, ohm·cm	1.1×10^{15}
Dielectric Strength, kV/mm (V/mil)	
@ 25 μm	40 (1016)
@ ≥50 μm	80-100 (2032-2540)
Dielectric Constant	3.79
Dissipation Factor	0.0092

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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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Parker LORD
Engineered Materials Group
111 LORD Drive
Cary, NC 27511-7923
USA
www.lord.com

Parker Hannifin Japan Ltd.
Tokyo Front Terrace, 16th Floor
2-3-14, Higashi-Shinagawa
Shinagawa-Ku, Tokyo
Japan 140-0002

phone 03-4212-3911
NVH092GInfoJapan@parker.com
www.lord.com/japan

