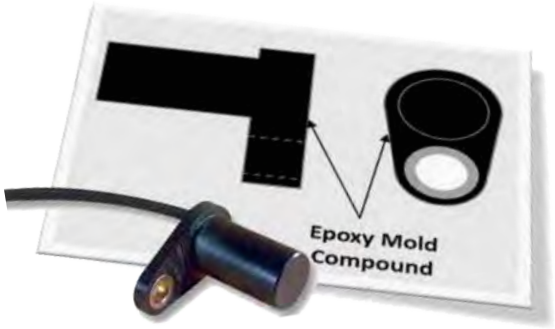
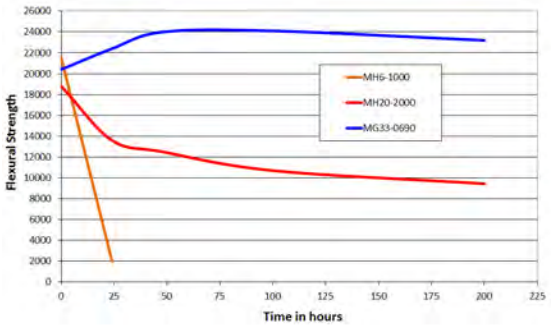
SolEpoxy™ MG33-0690

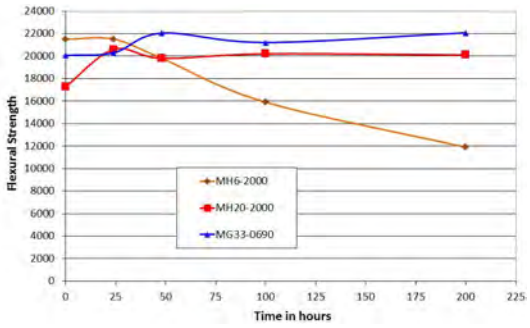
Fast cure, solvent resistant compound with superior copper adhesion for engine gear tooth and other automotive sensors



DESIGNED FOR GEAR TOOTH AND OTHER AUTOMOTIVE SENSORS



SOLVENT RESISTANT AGAINST AUTOMOTIVE FLUIDS, INCLUDING MINERAL SPIRITS



SOLVENT RESISTANT AGAINST AUTOMOTIVE FLUIDS, INCLUDING ETHYLENE GLYCOL

EXCELLENT ADHESION TO COPPER LEADFRAMES AND SUBSTRATES

DESCRIPTION

SolEpoxy™ MG33-0690 is a **fast cure, solvent resistant** epoxy mold compound with **excellent adhesion to copper** substrates.

MG33-0690 is a **highly cross-linked** compound used on devices that require resistance from typical automotive fluids including **ethanol, ethylene glycol, transmissions oils, automatic transmission fluids and mineral spirits**.

MH33-0690 is used to make **automotive engine actuators and sensors**, including engine gear tooth sensors, position sensors, speed sensors, torque sensors, parking sensors, tire pressure senors and other automotive engine sensors.

ADVANTAGES

- Excellent protection against common automotive fluids
- Designed to resist 1000 hours of ATF @ 150°C, which corrodes leadframes, bond lands, and wires
- Improved resistance to brake fluid, transmission oil and antifreeze (ethylene glycol)
- CTE-matched to PCB for PCB overmolding applications
- Used on devices with a long term operating temperature up to 150°C
- Designed to pass 1500 thermal cycles (air-to-air) from -40°C to +150°C
- Designed to pass AEC-Q200 test for solvent resistance

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RECOMMENDED CURE CONDITIONS

Mold Cure Conditions, minutes @ 180 °C	3
Post Mold Cure, hours @ 150 °C	2
Moldability [1], > 600 shots	■■■□

UNCURED PROPERTIES

Reinforced	no
Halogen-free	yes
Shelf Life, from date of manufacture, months, @ 10 °C	6

TYPICAL CURED GENERAL PROPERTIES

Available Colors [2]		Black
Specific Gravity, g/cc		1.83
Spiral Flow, inches,	@ 177 °C	27
Hot Plate Gel Time, seconds,	@ 160 °C	22
Mold Shrinkage (longitudinal) ASTM, inch/inch		0.0033

TYPICAL CURED MECHANICAL PROPERTIES

Flexural Modulus (E),	@ 25 °C	Mpsi GPa	2.61 18.0
Flexural Strength,	@ 25 °C	psi MPa	21,838 151
Tensile Modulus,	@ 25 °C	kpsi GPa	957 6.6
Tensile Strength,	@ 25 °C	psi MPa	15,540 107.1

TYPICAL CURED THERMAL PROPERTIES

Glass Transition Temperature (Tg) [3], °C		165
Coefficient of Thermal Expansion (CTE), ppm/°C,	Alpha 1 Alpha 2	18 54
UL RTI Rating, °C		130
UL Class Rating, UL 1446		B

TYPICAL CURED ELECTRICAL PROPERTIES

Volume Resistivity, ohms-cm,	500 volts @ 25 °C		89 x 10^{15}
Surface Resistivity, ohms/square,	500 volts @ 25 °C		15 x 10^{15}
Dielectric Strength [4],		volts/mil kV/mm	1052 41
Dielectric Constant, 10 kHz,	@ 25 °C		4.1

[1] rating: ■□□□ poor, ■■□□ fair, ■■■□ good, ■■■■ excellent
[2] custom colors can be formulated
[3] cured 60 minutes @ 150°C
[4] 20 mil / 0.51 mm thickness

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STORAGE & HANDLING

Materials should be stored at 10°C or below, in closed containers. After removal from cold storage, the material **must be allowed to come to room temperature** in the sealed container to avoid moisture contamination. Suggested waiting time is 24 hours. Please consult our *Product Handling Recommendations for Epoxy Mold Compounds*.

For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

DATA RANGES

The data contained herein may be reported as a typical value and/or range of values based on actual test data and are verified on a periodic basis.