PROTAVIC METRETHANE ™ 4717
SELF-HEALING, CROSSLINKED URETHANE GEL FOR CONNECTOR POTTING APPLICATIONS

PRODUCT DESCRIPTION

PROTAVIC Metrethane ™ 4717 is a part of a new class of **PROTAVIC** flexible urethane elastomers specifically designed for demanding electronic applications. ***Metrethane 4717*** is a two-component, low viscosity, 1:1 mix ratio self-healing, crosslinked polyurethane gel that has been specifically designed for potting cable connectors where excellent resistance to saltwater and fuel oils is needed. When cured, ***Metrethane 4717*** becomes a soft self-healing gel, designed for use where embedded connector circuitry must be checked visually and with test probes. Metrethane 4717 also provides a strain free shock absorbing cushion for delicate parts over a wide temperature range.

TYPICAL PROPERTIES

Should not be used for specification purposes

Composition	Urethane resin
Appearance	Amber, gelatinous
Mixed Viscosity	850 cps

Component Viscosity
Brookfield #3 spindle (25˚ C), centipoises

Product	Base	Activator
4717	150-250	750-1000

Specific Gravity, mixed 0.97

Component Specific Gravity

Product	Base	Activator
4717	0.98	0.96

Flash Point, Activator, ˚F	> 400˚
Flash Point, Base, ˚ F	> 250˚
Working Life, 100 grams	0.5 hours
Shelf Life	6 months
Mix rations, parts by weight	98:100
Mix ratio, parts by volume	1:1

CURED RESIN PROPERTIES

Electrical	
Dielectric constant, 1 Khz	4.18
Dissipation Factor, 1 Khz	.0031
Volume Resitivity, ohm-cm	2.3×10^{11}
Insulation Resistance, ohms	5.4×10^{10}
Mechanical	
Cone penetration value (1/10mm, ASTM D217)	310
Thermal	
Operating Temperature ˚ C	-40 to 77

PRODUCT BENEFITS

⇒ Quick cure at common processing temps.
⇒ Low-cost replacement for silicone RTV
⇒ Excellent shock absorbing properties
⇒ Soft, self-healing gel
⇒ Protects components from internal stresses
⇒ Prevents inductance drop after potting

Recommended Time/Temperature Exposure to Achieve Cure in Infrared or Convection Oven

Hours	Temp. ˚ C	Temp. ˚ F
48 hrs	25	75
4 hrs	60	140

Preparation of Mixture

For product purchased in two-component kits, mix the entire contents of ***Metrethane 4717*** base and activator (the proper mix ratio is 1:1 by volume) in their original shipping containers to a uniform consistency and color, each time, before dispensing. Take care to incorporate all material adhering to the bottom, sides and corners of the containers. Mechanical mixing of the components for two to three minutes is satisfactory. Measure only the approximate amount that can be applied in 0.5 hours.

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Preparation of Mixture Cont.

Blanket containers of unused base and activator with nitrogen prior to re-sealing for storage.

Air Removal Air entrapment during mixing may be removed in vacuum (5 mm of mercury). The holding container should be no more than one-third full. Allow the mixture to foam and then subside. Maintain the low pressure for several more minutes, at which point most of the large bubbles will have broken.

Application

The material can be poured or extruded in the required thickness after which the parts are set aside to cure using the recommended cure schedules listed on the first page.

STORAGE AND HANDLING

PROTAVIC Metrethane 4717 is a blend of urethane resins and curing agents. Keep stored in the original container at temperatures from 0˚ C to 25˚ C. The product is uniform when packaged. Read material safety data sheets before handling. Keep containers closed when not in use. Effective ventilation is necessary. Goggles, gloves and protective clothing should be worn during handling or exposure. Refer to the product MSDS for more information.

Availability and Order Information

Metrethane 4717 is available as a two-component kit consisting of separate containers of urethane resin and curing agent. ***Metrethane 4717*** is available in pint, quart, two gallon, and ten gallon kits.

Packaging Sizes & Types

Metrethane 4717 is packaged in Pint, Quart, Two Gallon, Ten Gallon and 55 Gallon drum kits.

Dual cartridges in 50cc, 200ml and 400ml sizes are available for convient mixing and application of ***Metrethane 4717***.

Ordering Information

When ordering, specify the name, number, letter designation, color, quantity, container size and packaging form. The order should be placed with the PROTAVIC order entry department. The minimum order size is $ 100.00. Evaluation kits are available for $ 40.00. The $ 40.00 fee will be credited against the first order for the product.