



# PRODUCT INFORMATION

## HIGH TECHNOLOGY MATERIALS

### MERECO METRETHANE™ 4707 FLEXIBLE URETHANE ELASTOMER

#### PRODUCT DESCRIPTION

**Mereco Metrethane 4707** is a part of a new class of **Mereco** flexible urethane elastomers specifically designed for demanding electronic applications. **Metrethane 4707** is a two-component, low viscosity system that provides excellent protection of electronic components ranging from transducers, sensors, load cells, delicate magnetic coils and bobbins to power supply applications where minimal inductance drop after potting is required.

#### TYPICAL PROPERTIES

Should not be used for specification purposes

Composition Urethane resin  
Color Translucent/Opaque  
Any requested

Mixed Viscosity

Brookfield # 3 spindle (25° C), centipoise

Product	20 RPM	50 RPM
4707	500	490

Specific Gravity 1.02  
Flash Point, Activator, °C 93 (200° F)  
Flash Point, Base, °C 204 (400° F)  
Working Life, 100 grams 0.5 hours  
Shelf Life 6 months  
Mix ratio, parts by weight 1: 2.5  
Mix ratio, parts by volume 1: 3

#### **Cured Resin Properties**

##### Mechanical

Tensile Strength, psi 1,000  
Elongation at Break, % 180  
Hardness (Shore A) 70 +/-5  
Glass Transition Temp. T<sub>g</sub> 0°C (32°F)

##### Electrical

Volume Resistivity 5.2 X 10<sup>13</sup> ohms-cm  
Dielectric Constant, 1MHz 3.60  
Dielectric Strength 400 volts/mil

##### Thermal

Operating Temperature °C -70 to 105

#### PRODUCT BENEFITS

- ⇒ Quick cure at common processing temps.
- ⇒ Can be designed with any color
- ⇒ Low-cost replacement for silicone RTV
- ⇒ Excellent damping properties
- ⇒ Good coefficient of thermal expansion
- ⇒ 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
2 hrs	65	145
24 hrs	25	77

#### Preparation of Mixture

For product purchased in two-component kits, mix the entire contents of **Metrethane 4707** base and activator 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. 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.

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### **Application**

The material can be poured 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**

**Mereco Metrethane 4707** 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 4707** is available as a two-component kit consisting of separate containers of urethane resin and curing agent. **Metrethane 4707** is available in pint, quart, one gallon, and five gallon kits.

### **Packaging Sizes & Types**

Pints, Quarts, Gallons, 5 Gallons, 55 Gallon Drums

### **Ordering Information**

When ordering, specify the name, number, letter designation, color, quantity, container size and packaging form. The order should be placed with the Mereco order entry department at 1-800-556-7164 or by mail to the address listed on this bulletin. 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.