



PRODUCT INFORMATION

HIGH TECHNOLOGY MATERIALS

MERECO METRETHANE™ 4703 FLEXIBLE URETHANE ELASTOMER

PRODUCT DESCRIPTION

Mereco Metrethane 4703 is a part of a new class of **Mereco** flexible urethane elastomers specifically designed for demanding electronic applications. **Metrethane 4703** 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. This low durometer system is capable of continuous performance at 130°C (265°F) with no heat aging effects.

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
4703	1220	1050

Specific Gravity 1.03
Flash Point, Activator, °C 250(480° 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: 13
Mix ratio, parts by volume 1: 15

Cured Resin Properties

Mechanical

Tensile Strength, psi 188
Lap shear Strength, psi
Aluminum to Aluminum 70 - 90
Elongation at Break, % 110
Hardness (Shore A) 30 +/-5
Glass Transition Temp. T_g -50°C (-58°F)

Electrical

Volume Resistivity 8.0 X 10¹³ ohms-cm
Dielectric Constant, 1MHz 4.40
Dielectric Strength 400 volts/mil

Thermal

Operating Temperature °C -70 to 130

PRODUCT BENEFITS

- ⇒ Quick cure at common processing temps.
- ⇒ Can be designed with any color
- ⇒ Low-cost replacement for silicone RTV gel
- ⇒ Excellent damping properties
- ⇒ Good coefficient of thermal expansion
- ⇒ Protects components from internal stresses
- ⇒ Prevents inductance drop after potting
- ⇒ Continuous performance at 130°C

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

Hours	Temp. °C	Temp °F
2 hrs	65	149
24 hrs	25	77

Preparation of Mixture

For product purchased in two-component kits, mix the entire contents of **Metrethane 4703** 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.

Technical information and recommendations made by Mereco Division and Metachem Resins Corporation concerning products and uses or applications thereof, are based on reliable laboratory tests and are believed to be accurate. No warranty, however, is expressed or implied, nor is any warranty expressed or implied as to results to be obtained from use of said materials, whether used singly or in combination with other products. No statements made are to be construed as constituting a license under any existing patent.

FORM 1105 REV. 0

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 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 4703 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 4703 is available as a two-component kit consisting of separate containers of urethane resin and curing agent. **Metrethane 4703** 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.