



# PRODUCT INFORMATION

## HIGH TECHNOLOGY MATERIALS

### METREGRIP 3090 SERIES SURFACE MOUNT ADHESIVES

#### PRODUCT DESCRIPTION

**Mereco Metregrip 3090 series** is a new class of epoxy based adhesives specifically designed for bonding surface mount components to circuit boards. **Metregrip 3090** is a one-component, thixotropic system that is excellent for bonding passive and active components to FR4 substrates.

#### TYPICAL PROPERTIES

##### Uncured Resin

Composition	Epoxy resin
Color	Any available
Viscosity	
Brookfield #7 spindle (25°C, centipoise)	
5 rpm	275,000
50 rpm	61,000
Thixotropic Index	4.5
Specific Gravity	1.2
Extrusion Rate (0.5 inch x 0.033 inch tube, 50 psig), g/hr	23
Toxicity	Low (See MSDS)
Flash Point, °C	>92.4 (200°F)
Shelf Life	3 months

##### Cured Resin

##### Mechanical

Tensile Strength, psi	9000
Lap shear Strength, psi	
Aluminum to Aluminum	800
Elongation at Break, %	6
Hardness (Shore D)	87
Glass Transition Temp. T <sub>g</sub>	56°C (132.8°F)

##### Electrical

Volume Resistivity	1.0 x 10 <sup>15</sup> ohms-cm
Surface Resistivity	1.0 x 10 <sup>13</sup> ohms-cm
Dielectric Constant, MHz	3.2
Dielectric Strength	700 volts/mil

##### Thermal

Weight Loss, % (48 hr, 200°C)	2
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#### PRODUCT BENEFITS

- ⇒ One component system, no mixing or measuring
- ⇒ Quick cure at common processing temperatures
- ⇒ Easily applied via syringe
- ⇒ No stringing
- ⇒ Excellent green strength, will hold components
- ⇒ Thixotropic, will not slump or sag
- ⇒ Superior adhesion to FR4 board materials
- ⇒ Excellent resistance to wave solder
- ⇒ Can be designed with any color for easy inspection

##### Colors Available

Product #	Color	Product #	Color
3092	Brown	3095	Orange
3093	Black	3096	Green
3094	Red	3097	Yellow

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

Minutes	Temp. °C	Temp. °F
1.5	150	300
2.5	121	250
7	100	212
8	93	200

##### Packaging

Syringes	1cc, 3cc, 5cc, 10cc, 30cc
Jars	2 oz, 4 oz, 8 oz, 16 oz, 32 oz

#### STORAGE AND HANDLING

**Mereco Metregrip 3090** is a blend of epoxy resins and latent curing agents. It is hygroscopic, absorbing moisture which alters the viscosity and reactivity. It is also basic, absorbing carbon dioxide which interacts with some reactive groups. It is best stored in the original container at temperatures from 0°C to 25°C. The product is uniform when packaged. Some settling may take place in storage beyond three months. Uniformity is restored with gentle stirring at 25°C. Consult material safety data sheet before handling. Keep containers closed when not in use. Effective ventilation necessary. Goggles, gloves and protective clothing should be worn during handling or exposure.

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.

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