



# ShrinkMate® Cable Joint EMI Shielding

## ECCO ShrinkMate® Conductive heat shrink provides EMI shielding without the use of solder

This lightweight solution provides not only electrical continuity, EMI, RFI, and ESD shielding, but also enables electrical connection between components of various sizes and shapes, and between solderable and non-solderable surfaces.

ECCO's ShrinkMate® combines use of MIL-I-23053/5 polyolefin tubing, or clear medical grade polyester tubing and a highly conductive Polymer Thick Film silver inner coating. The coating shrinks with a heat gun, oven, or any other conventional heat source. When the tubing is set, the inner conductive layer provides an electrical connection between the outside surface of the objects that are joined by the tubing. Coaxial cable butt joints and cable to shielded connector housing joints can be made fast and easy and without the use of solder.

### SPECIFICATIONS

#### Environmental & Electrical

Materials Available	Multi-Purpose Polyolefin (black or clear)	Clear Medical-Grade Polyester
Operating Temperature	-55° C to +135° C	Please Contact ECCO
Longitudinal Shrink	2%	Please Contact ECCO
Shrink Ratio (diameter)	2:1 & 3:1	15-20% at 85° C to 190° C
Processing Temperature	120° C	Please Contact ECCO
Dielectric Strength	600 Volts/mil	>4,000 V/mil
Conductivity	The resistance of a shrunken tube is approximately 1 ohm per inch. The resistance of any splice is determined by the gap between two objects being spliced. A 0.1 inch gap will have 0.1 ohm resistance.	
Outgassing	Passes the Aerospace Industry General Specification Vacuum Stability Requirements of Polymeric Material for Spacecraft Application for Mass Loss and Collected Volatile Condensable Materials per ASTM E-595, NASA Sp-R-002A and ESA PSS-01-702.	
EU REACH Compliance	Reach Compliant through 16 December 2013	
RoHS Compliance	Compliant to RoHS Directive 2011/65/EU and amendments through Directive 2012/51/EU	

### Key Features

- Eliminates soldering
- Fast & Easy Connections
- Lightweight
- Very small diameters available
- Ideal for splicing coaxial cables
- Forms cable to shielded housing connections

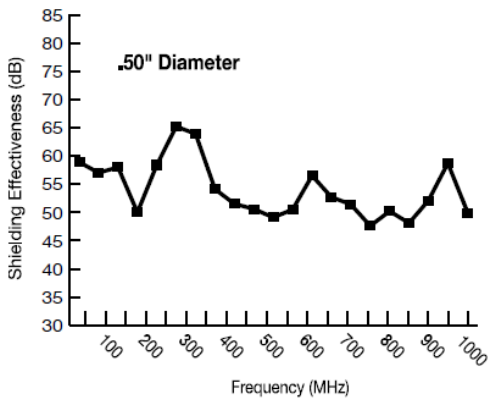
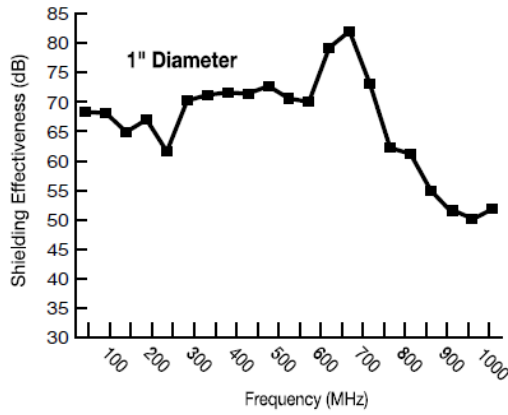
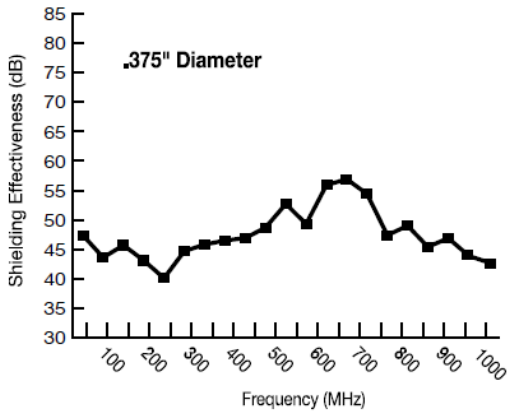
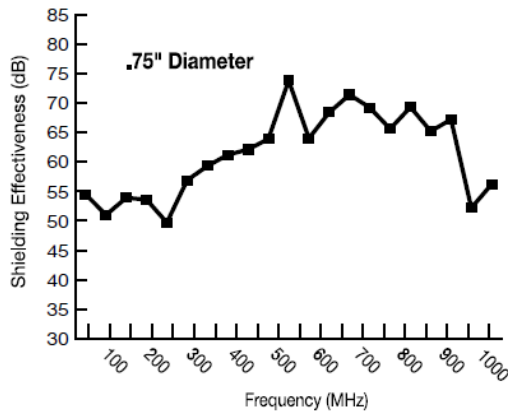
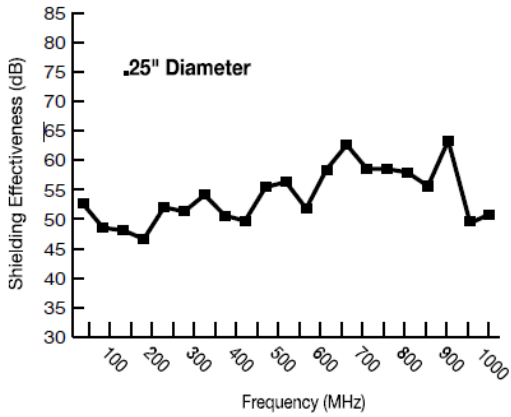


Black Polyolefin Tubing



Heat Shrink Transition Boots using MIL-I-81765/1A Polyolefin

**Shielding Effectiveness**



**Notes:**

All ECCO ShrinkMate® tubing sample sizes were 10" long, standard polyolefin shrink tubing with polymer thick film silver inner diameter coating.

**ORDERING INFORMATION**

Material	Part Number
Black Polyolefin (2:1)	SM111
Black Polyolefin (3:1)	SM333
Clear Polyolefin	CM111
Clear Medical Grade Polyester	PL111

**CONTACT INFORMATION**

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Clear Polyolefin applied