

3M™ Electrical Moisture Block EMB

3M™ Electrical Moisture Block (EMB) is a specially formulated rubber adhesive/sealant for moisture proofing wire bundles.

- Resistant to salt water, corrosive chemicals and automotive fluids
- Flexible over a wide temperature range
- Easily installed
- Flame retardant

3M EMB moisture block is a self-fusing, rubber based insulating adhesive/sealant designed to prevent the migration of water along harness wiring. 3M EMB moisture block is supplied on a release liner and offered in standard sizes to accommodate different size wire bundles. 3M EMB moisture block is compatible with typical wire insulation such as PVC, synthetic rubber, and crosslinked polyethylene.

Performance Criteria

3M EMB moisture block is supplied on a release liner in three thicknesses. They are compatible with typical extruded wire insulations found in automotive and marine wiring. The product is not functionally affected by moisture, or automotive fluids, and withstands severe vibration and extreme temperature changes. Sealed wire harnesses have demonstrated effective moisture proofing in vehicles through-firewall applications. In addition, sealed harnesses withstand direct spray in 3M laboratory tests.

Installation Techniques

Remove cut piece from liner. Place among wires ensuring there is space between wires to allow room for sealant flow. Wires are best aligned vertically to accomplish this. Wrap around to other side of wire and press together (figure 1).

A second assembly can then be pressed into the original. Further wires are sealed in the same manner (figure 2).

After assembly, the sealant is pressed together and shaped by hand and then compressed with a mechanical tool. To complete the harness moisture block, tightly insulate with 3M Heat Shrink or Cold Shrink Tubing or 3M Vinyl Tape (figure 3).

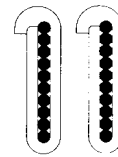


Figure 1

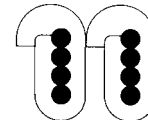


Figure 2

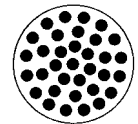


Figure 3

Storage

Under normal storage conditions (23°C, @ 50% RH), 3M EMB moisture block will have a minimum two year shelf life when the material is stored in the original container.

Product Description

Part Number	Color	Pad Thickness	Pad Dimensions
EMB-45R	Black	.045"	0.75" x 100'
EMB60	Black	.060"	0.75" x 100'
EMB60R	Black	.060"	0.75" x 100'
EMB-75	Black	.075"	0.875" x 4"

100 foot rolls and other sizes available by special order.

Typical Properties

Property	Value*
Thickness of Sealant ¹	
EMB-45R	45 mils
EMB-60/EMB-60R	60 mils
EMB-75	75 mils
Adhesion to Steel ¹	12.5 lbs/in. width (22 N/10 mm)
Adhesion to Polyethylene ²	12.5 lbs/in width (22 N/10 mm)
Water Absorption ³	0.75%
Heat Resistance ⁴	130°C

Test Methods

¹ASTM-D1000-82a

²ASTM-D1000-82a modified

³ASTM-D570-63

⁴Ford Performance Test ES-FOEB-1A263-AA

*Not recommended for specification purposes. Product specifications will be provided upon request.