

### M-Coat FBT Soft Seal Protective Coating

#### GENERAL DESCRIPTION

M-Coat FBT was specifically developed for strain gage based transducers which require a high degree of protection from moisture, but cannot tolerate the reinforcement effects of a stiff or hard protective coating. M-Coat FBT is a solvent-thinned butyl rubber compound which, when cured, forms a pliable covering, effective in sealing out moisture without restricting the load-sensing elements of the transducer.

The long-term moisture-barrier performance of M-Coat FBT is not as good as properly applied microcrystalline wax; but is superior to most other organic materials. It is superior to wax in physical properties and operating-temperature range.

In the uncured state, M-Coat FBT has a paste-like consistency and can be spread to the desired thickness with a spatula. Automatic dispensing devices can also be used for the application of M-Coat FBT.

Operating temperature of M-Coat FBT is between 0° and +175°F [-18° and +80°C]. Exposure to a somewhat more extended range will not cause damage; however, the coating will add reinforcement due to stiffening at lower temperatures. The highest allowable Exposure temperature is approximately +250°F [+120°C].

Shelf life is a minimum of 12 months at +75°F [+24°C]. Refrigeration will not extend shelf life.

#### CLEANING AND REMOVAL

Both cured and uncured M-Coat FBT can be removed with solvents such as Micro-Measurements CSM degreaser, Rosin Solvent (RSK-1), or with MEK (Methyl Ethyl Ketone).

#### GAGE AND SURFACE PREPARATION

The bonded gage and surrounding area must be free of oils, moisture, and other contaminants that might prevent proper adhesion of M-Coat FBT. Special attention should be given to the removal of soldering fluxes and fingerprints. Generally, a thorough final washing with a clean solvent followed by a warm-air drying cycle is sufficient.

#### APPLYING M-COAT FBT

M-Coat FBT should be spread out evenly to the desired thickness over the gage and surrounding area.

**Note:** To ensure proper curing, a thickness of more than 0.10 in [2.5 mm] is not recommended.

It is important that the wires leading to the gage are encapsulated by the coating for a minimum length of about 1/2 in [~12 mm]. This is to prevent fluid migration along the leadwires to the gage.

#### CURING M-COAT FBT

Since M-Coat FBT is a solvent-releasing compound, it is important to follow a cure schedule that allows a release of all of the solvents. The following schedule is recommended:

Air-dry approximately 8 hours, followed by an oven cure of 4 to 6 hours at +150° to +175°F [+65° to +80°C]. Time and temperature will vary according to thickness of coating.

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