

## 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).

#### Handling Precautions

While this material is considered relatively safe to handle, contact with skin and inhalation of vapors should be avoided. Immediate washing with ordinary soap and water is effective in cleansing should skin contact occur. For eye contact, rinse thoroughly with a copious amount of water and consult a physician. For additional health and safety information, consult the Safety Data Sheet, which is available upon request.

### 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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