

Tyfo® MB-3

High Performance Adhesive

DESCRIPTION

Tyfo® MB-3 is a two-component, solvent-free, high performance adhesive epoxy matrix material specially formulated to provide improved adhesion of the Tyfo® Fibrwrap System to metals, vertical and overhead applications.

USE

Tyfo® MB-3 is recommended for use in special applications where Tyfo® S or WS Epoxy will not provide adequate adhesion between the fabric and substrate. Typical examples for use are bonding to metals, overhead or vertical surfaces, undersides of beams when applying composite materials, horizontal or vertical surfaces where excellent adhesion to a substrate is necessary for maximum strength, wall surfaces, and any surface where bonding between fabric and substrate is critical. Tyfo® MB-3 can also be used to improve the bond between successive layers of the Tyfo® Fibrwrap System.

ADVANTAGES

- Excellent adhesive properties
- Good high temperature properties
- Good low temperature properties
- Long working time (1-2 hours)
- High elongation
- Ambient cure

COVERAGE

One unit of Tyfo® MB-3 will cover approximately 10 to 25 sq. ft. (0.92 to 2.3m²) of surface area at a thickness of 1/16" (2mm). The existing condition of the surface as well as the temperatures of both the epoxy and application surface will significantly affect the coverage estimation.

PACKAGING

Order in pre-measured units in 1-gallon, 1-quart containers.

MIX RATIO

100.0 parts of component A to 29.4 parts of component B by volume. (100 parts of component A to 23.3 parts of component B by weight.)

SHELF LIFE

One year in original, unopened and properly stored container.

STORAGE CONDITIONS

Store in a cool place. Temporary storage of these components should not be in high temperatures, particularly the "A" component. The lids of both components should be kept tightly sealed. Avoid freezing.

CERTIFICATE OF COMPLIANCE

- Will be supplied upon request, complete with state and federal packaging laws with copy of labels used.
- Material safety data sheets will be supplied upon request.

HOW TO USE TYFO® MB-3

INSTALLATION

Tyfo® System to be installed by Fyfe Co. LLC trained and certified applicators. Installation shall be in strict compliance with the Fyfe Co. LLC Quality Control Manual.

SURFACE PREPARATION

The required surface preparation is largely dependent on the type of element being strengthened. In general, the surface must be clean, dry and free of protrusions or cavities, which may cause voids behind the Tyfo® composite. Discontinuous wrapping surfaces (walls, beams, slabs, etc.) typically require a light sandblast, grinding or other approved methods to prepare for bonding. If waterblasting is used, allow a sufficient amount of time for adequate drying prior to application of epoxies. Mechanical anchors are incorporated in some designs. The Fyfe Co. LLC engineering staff will provide the proper specifications and details

based on the project requirements. For steel, surface should be blast cleaned to near white finish.

MIXING

For pre-measured units in 1-gallon, 1-quart containers, pour the contents of component B into the pail of component A. Mix ratio: 100.0 parts of component A to 29.4 parts of component B by volume (100 parts of component A to 23.3 parts of component B by weight). Do not thin; solvents will prevent proper cure. Mix thoroughly for five minutes with a Tyfo® low speed mixer at 400-600 RPM until components are thoroughly dispersed. Excessive mixing will shorten pot life.

APPLICATION

Apply a prime coat of Tyfo® S or WP Epoxy to the prepared surface and allow to tack. Apply Tyfo® MB-3 with a roller, trowel or non-porous float.

Note: Avoid applying layers thicker than 1/16" (2mm) as this will not provide additional tackiness. If the Tyfo® MB-3 begins to set up before the fabric can be applied, scrape off and apply freshly mixed Tyfo® MB-3 and allow to tack prior to the application of the fabric.

SET UP TIME

Tyfo® MB-3 is formulated to give a minimum of 1 to 2 hours working time. Cooler temperatures will usually extend and warmer temperatures shorten the working time.

EPOXY COMPONENT PROPERTIES		
Property	ASTM Test Method	Value
Mix Ratio, by volume		100:29.4
Color		Translucent Beige
Viscosity, cps		
Component A		180,000
Component B		200
Component A & B		55,000
Gel Time, 150 grams		250 minutes
Thin Film Set		14 - 16 hours
Bond Strength		
Dry Concrete		Excellent
Compressive Strength, psi		4,088
Tensile Strength, psi	D638	3,285 (22.7 MPa)
Tensile Modulus, psi	D638	174,000 (1.2 GPa)
Tensile Elongation, %	D638	1.88
Flexural Strength, psi	D790	6,645 (45.8 MPa)
Flexural Modulus, psi	D790	178,000 (1.23 GPa)
T _g	E1356	160° F (71° C)

LIMITATIONS

Application temperature of the epoxy is a minimum 40° F (4° C) and maximum of 100° F (38° C). **DO NOT THIN**, solvents will prevent proper cure.

CAUTION!

COMPONENT A - Irritant:

Prolonged contact to the skin may cause irritation. Avoid eye contact.

COMPONENT B - Irritant:

Corrosive. Contact with skin may cause severe burns. Avoid eye contact. Product is a strong sensitizer. Use of safety goggles and chemical resistant gloves recommended. Remove contaminated clothing. Avoid breathing vapors. Use adequate ventilation. Use of an organic vapor respirator recommended.

SAFETY PRECAUTIONS

Avoid breathing vapors. Avoid contact with eyes and skin. Use of an approved respirator with an organic absorption cartridge is recommended for possible vapors. Rubber gloves, rubber boots, and protective suits are recommended for handling and application of this material. Safety glasses or a face shield are recommended to prevent eye contact.

FIRST AID

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water; contact physician immediately. For respiratory problems, remove to fresh air. Wash clothing before reuse.

CLEANUP

Collect with absorbent material, flush with water. Dispose of in accordance with local disposal regulations. Uncured material can be removed with approved solvent. Cured materials can only be removed mechanically.

SHIPPING LABELS CONTAIN

- State specification number with modifications, if applicable
- Component designation
- Type, if applicable
- Manufacturer's name
- Date of manufacture
- Batch name
- State lot number, if applicable
- Directions for use
- Warnings or precautions required by law

**KEEP CONTAINER TIGHTLY CLOSED.
NOT FOR INTERNAL CONSUMPTION.
CONSULT MATERIAL SAFETY DATA SHEET
(MSDS) FOR MORE INFORMATION.
KEEP OUT OF REACH OF CHILDREN.
FOR INDUSTRIAL USE ONLY.**

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