

TD.830 – TECHNICAL DATA: HERMETIC™ Methyl Methacrylate (MMA) Coatings

Revised: 11/28/2023 Version: 1.7

Product Class: Methacrylic resins

Description: HERMETIC™ MMA Coatings consist of three versions: Primer, Body/Top Coat and High Temp Top Coat. Formulated to rapidly cure at temperatures as low as 0°F / -17°C which allows for fast return to service. HERMETIC™ MMA Coatings can provide smooth or non-slip textured surfaces in a variety of clear, pigmented, flake and quartz finishes. These coatings can be applied on dry concrete, asphalt and metal surfaces indoor or outdoor substrates which have been properly prepared, cleaned and dry.

Typical Uses:

- Storage rooms
- Salesrooms and exhibition rooms
- Bakeries, cafes, beverage stores
- Laboratories, pharmaceutical industry
- Warehouses
- Printing shops, distributing centers, workshops
- Gyms, discotheques
- Changing rooms
- Zoo enclosures (indoors)
- Museums, banks

Key Features:

- Rapid curing return to full service after 2 hours curing
- Cures down to 0°F
- Extremely hard wearing
- Good resistance to tire skid marks
- Optional heat resistance up to 400°F / 204°C
- Highly resistant to petrochemicals
- Excellent for extreme conditions where forklift traffic is present
- Good resistance to acids, alkalis and many detergents
- Seamless and water tight

PHYSICAL PROPERTIES

Mix ratios:		See BPO chart below
Color		Clear – Optional pigment
Odor		Strong 'ester'
Compressive strength	ASTM D 695	6,382 psi
Compressive Modulus	ASTM D 695	304,579 psi
Tabor abrasion	ASTM D 4060 CS 17 wheel, 1000 gm x 1000 Cycles	40 mg. loss
Tensile strength	ASTM D 638	1,276 psi
Tensile elongation %	ASTM D 638	0.8%
Adhesion to concrete	ASTM D 4541	350 psi
Reaction to fire	EN 13501-1 Class	Efl
Shelf life	stored properly in temperatures between 70°F-104°F (21°C - 40°C)	1 year in unopened containers

Package sizes:

2 gallon & 5 gallon kits (liquid MMA resin + BPO powder hardener)

Surface preparation for existing concrete:

Remove all loose or deteriorated concrete, laitance and contaminates such as grease, form oils, dirt, coatings, sealers, etc. Surface must be dry before application of HERMETIC™ MMA Coatings.

Application:

Primer - Using the correct amount of BPO powder stir in to primer for 1 minute and immediately squeegee out and back roll (350-400 sq. ft.) per gallon. Note: A second coat of primer may be required if the primer absorbs in the substrate to ensure a continuous coat over the entire surface

To build additional thickness and strength, broadcast 50 sieve dry silica sand to excess into the second coat (never the first primer coat) of primer and allow to cure. Curing will be 30 minutes to 1 hour depending upon temperature. Prime all substrates before application of body/top coat.

For flake/quartz broadcast, apply primer and allow to cure. Within a 5 to 6 hour window, apply body/top coat and immediately broadcast the desired media.

See chart BELOW

Do not apply heavy coats, keep applications thin or curing and properties will be compromised. After primer cures, sweep up excess sand and vacuum surface. Apply body/top coat as a smooth clear or pigmented coating as a flake filled coating, as a color quartz filled coating or as a top coat or troweled mortar as required. Use as a high mechanical load bearing and industrial and commercial flooring and where tire marks from forklifts are an issue. When using the base/top coat, it is essential to apply an intermediate primer coat before application of the base/top coat.

The base/top coat is recommended for production areas in the food industry for protection from hot water and animal fat resistance up to 140°F / 60°C. For temperatures higher but not exceeding 400°F / 204°C the use of the high temp top coat is required. Note: MMA will contaminate prepared and even unopened/sealed food. All food items must be removed from the building prior to application.

Mix the proper amount of BPO powder and spread with a squeegee and back roll over the surface.

Apply the body/top coat on smooth surfaces with a rubber squeegee and a short nap mohair roller @ 300-350 sq ft per gallon. For top coating broadcast or flake flooring use a squeegee to distribute over the surface and back roll with 3/16" nap, non-linting roller.

When the body/top coat, a primer coat first before it is applied as a final top coat.

Note: MMA's carry a strong odor that is unpleasant to certain individuals. Sufficient air circulation is highly recommended in all settings and environments.

MIXING (BPO POWDER):

MMA PRODUCT	Temperature	BPO powder (per gallon)	pot life	cure time
Primer:	41° F	6.50 LIQUID OUNCES	8 MIN.	APROX. 30 MIN
	50° F	5.00 LIQUID OUNCES	8 MIN	APROX. 30 MIN
	59° F	3.75 LIQUID OUNCES	7 MIN	APROX. 30 MIN
	68° F	2.50 LIQUID OUNCES	8 MIN	APROX. 30 MIN
	86° F AND HIGHER	1.50 LIQUID OUNCES	6 MIN	APROX. 30 MIN
Body/Top Coat:	41° F	5.00 LIQUID OUNCES	20 MIN	APROX. 60 MIN
	50° F	3.75 LIQUID OUNCES	25 MIN	APROX. 55 MIN
	68° F	2.50 LIQUID OUNCES	17 MIN	APROX. 35 MIN
High Temp Top Coat:	41° F - 50° F	2.00 LIQUID OUNCES	75 MIN	APROX. 80 MIN
	51° F - 68° F	2.00 LIQUID OUNCES	35 MIN	APROX. 45 MIN
	69° F - 95° F	1.50 LIQUID OUNCES	18 MIN	APROX. 35 MIN