



SYSTEM BULLETIN

EPO-FLEX® MER I (Mechanical Equipment Room)

Product Description

EPO-FLEX MER I (MECHANICAL EQUIPMENT ROOM) SYSTEM combines EPO-FLEX crack bridging and waterproofing capabilities with an optional chemically resistant topcoat. EPO-FLEX achieves flexibility without the use of plasticizers or other additives which can separate or migrate as the system ages. This means that the product remains flexible and continues to function for many years.

Advantages

- -0- VOC, Low odor
- Bridges hairline cracks, thereby aiding in suppression of cracks reflecting through the system due to substrate movement
- Durable, Slip resistant
- Waterproof
- Chemical and stain resistant

Uses

- Mechanical Equipment Room
- Mezzanines
- Clean Rooms
- Lockers Rooms and Showers
- Computer Rooms

System Specification

EPO-FLEX MER I (MECHANICAL EQUIPMENT ROOM) SYSTEM shall consist of an optional primer 3579 Standard Binder/Binder, 3555 EPO-FLEX HD Epoxy Coating as a waterproofing membrane, a second coat of 3555 EPO-FLEX HD Epoxy Coating with Dry Silica Aggregate as a wearcourse finish and 4685P POLYCOTE™ 100% Solids Urethane as an optional finish coat.

Typical Physical Properties of 3555

Color	Gray
VOC (Volatile Organic Content)	-0-
Hardness, Shore D ASTM D 2240	50/40
Tensile Strength ASTM D 412	1,700 psi
Elongation ASTM D 412	80%
Adhesion ACI 503R	350 psi 100% concrete failure
Flammability	Self-Extinguishing over concrete
Thermal Cycling ASTM C 884 (24 hours, -21°C to 25°C)	No Cracking

ASTM C = Mortar system
ASTM D = Resin only

Installation

General Polymers materials shall only be installed by approved contractors. The following information is to be used as a guideline for the installation of the EPO-FLEX MER I (MECHANICAL EQUIPMENT ROOM) SYSTEM. Contact the Technical Service Department for assistance prior to application.

Surface Preparation - General

General Polymers systems can be applied to a variety of substrates, if the substrate is properly prepared. Preparation of surfaces other than concrete will depend on the type of substrate, such as wood, concrete block, quarry tile, etc. Should there be any questions regarding a specific substrate or condition, please contact the Technical Service Department prior to starting the project. Refer to Surface Preparation (Form G-1).

Surface Preparation - Concrete

Concrete surfaces shall be abrasive blasted to remove all surface contaminants and laitance. The prepared concrete shall have a surface profile equal to CSP 3-5. Refer to Form-G-1.

After initial preparation has occurred, inspect the concrete for bug holes, voids, fins and other imperfections. Protrusions shall be ground smooth while voids shall be filled with a system compatible filler. For recommendations, consult the Technical Service Department.

Temperature

Throughout the application process, substrate temperature should be 60°F - 90°F. Substrate temperature must be at least 5°F above the dew point. Applications on concrete substrate should occur while temperature is falling to lessen offgassing. The material should not be applied in direct sunlight, if possible.

Application Information

Material	Mix Ratio	Theoretical Coverage Per Coat Concrete	Packaging
Primer (optional) 3579	2:1	250 sq. ft. / gal	3 or 15 gals
Membrane 3555	1:1	80 sq. ft. / gal	2 or 10 gals
Finish / Wearcourse 3555 Dry Silica	1:1	100 sq. ft. / gal 6-8 lbs. / 100 sq. ft.	2 or 10 gals 100 lbs
Finish Coat (optional) 4685P	1:1	250 sq. ft. / gal	2 or 10 gals

Primer (Optional)

Mixing and Application

1. Premix 3579 A (resin) and 3579 B (hardener) separately, using a low speed drill and Jiffy mixer. Mix for three minutes and until uniform, exercising caution not to introduce air into the material.
2. Add 2 parts 3579 A (resin) to 1 part 3579 B (hardener) by volume. Mix with low speed drill and Jiffy mixer for three minutes and until uniform. To insure proper system cure and performance, strictly follow mix ratio recommendations.
3. 3579 may be applied via spray, roller or brush. Apply 5-8 mils, evenly, with no puddles. Coverage will vary depending upon porosity of the substrate and surface texture.
4. Wait until primer is tacky (usually 1 hour minimum), before applying the slurry. If primer is not going to be topped within open time, broadcast silica sand into resin lightly but uniformly and allow to cure overnight.

Waterproofing Membrane

Mixing and Application - If priming is done to reduce outgassing, allow to cure overnight before topping

1. Premix 3555A (resin) and 3555B (hardener) separately, using a low speed drill and Jiffy mixer. Mix for three minutes and until uniform, exercising caution not to whip air into the material.
2. Add 1 part 3555A (resin) to 1 part 3555B (hardener) by volume. Mix with low speed drill and Jiffy mixer for three minutes and until uniform.
3. Immediately pour the mixed material onto the substrate and pull out using a 1/4" or 1/8" v-notched squeegee to yield 20 mils WFT and cross roll with a 3/8" nap roller. Readings must be taken continuously during application with a wet mil gauge to verify material is being applied at the proper thickness. Allow to cure overnight at 73°F surface temperature. Material cures slower at lower temperatures.
4. After the membrane is cured, check for surface blush. Remove any blush with detergent wash prior to applying wearcourse.

Finish / Wearcourse

Mixing and Application

1. Premix 3555A (resin) and 3555B (hardener) separately, using a low speed drill and Jiffy mixer. Mix for three minutes and until uniform, exercising caution not to whip air into the material.
2. Add 1 part 3555A (resin) to 1 part 3555B (hardener) by volume. Mix with low speed drill and Jiffy mixer for three minutes and until uniform.
3. Immediately pour the mixed material onto the substrate and pull out using an 1/8" v-notched squeegee to yield 12 mils WFT and cross roll with a 3/8" nap roller. Readings must be taken continuously during application with a wet mil gauge to verify material is being applied at the proper thickness. Material cures slower at lower temperatures.
4. Broadcast 6 to 8 lbs Dry Silica Sand (30 mesh) or other Hard Aggregate per 100 sq. ft.
5. Immediately backroll material to wet out and encapsulate the silica sand.

NOTE: The floors finished appearance depends on the manner in which the aggregate has been applied and backrolled. In grass seed like fashion, allow the aggregate to fall after being thrown upward and out. **DO NOT THROW DOWNWARD AT A SHARP ANGLE USING FORCE.**

Finish Coat (Optional)

Mixing and Application

1. Premix 4685PA (resin) using a low speed drill and Jiffy mixer. Mix for three minutes and until uniform, exercising caution not to introduce air into the material.
2. Add 1 part 4685PA (resin) to 1 part 4685B (hardener) by volume. Mix with low speed drill and Jiffy mixer for three minutes and until uniform. To insure proper system cure and performance, strictly follow mix ratio recommendations.
3. Apply 4685P using a squeegee and backroll with a 1/4" nap roller at a spread rate of 250 sq. ft. per gallon, evenly, with no puddles making sure of uniform coverage. **Take care not to puddle materials and insure even coverage.**
4. Allow to cure 24 hours minimum before opening to traffic.

Coating materials will appear to be cured and "dry to touch" prior to full chemical cross linking. Allow 4685 to cure for 2-3 days prior to exposure to water or other chemicals for best performance.

Cleanup

Clean up mixing and application equipment immediately after use. Use toluene or xylene. Observe all fire and health precautions when handling or storing solvents.

Safety

MSDS (Material Safety Data Sheets) must be read and understood by personnel responsible for supervision and installation of General Polymers Brand Materials. In particular, PPI (Personal Protection Index) data should be consulted to help insure safe handling. All applicable federal, state, local and particular plant safety guidelines must be followed during the handling and installation and cure of these materials.

Safe and proper disposal of excess materials shall be done in accordance with applicable federal, state, and local codes.

Material Storage

Store materials in a temperature controlled environment (50°F - 90°F) and out of direct sunlight.

Keep resins, hardeners, and solvents separated from each other and away from sources of ignition. One year shelf life is expected for products stored between 50°F - 90°F.

Maintenance

Occasional inspection of the installed material and spot repair can prolong system life. For specific information, contact the Technical Service Department.

Shipping

- Destinations East of the Rocky Mountains are shipped F.O.B. Cincinnati, Ohio
- Destinations West of the Rocky Mountains are shipped F.O.B. Victorville, California

For specific information relating to international shipments, contact your local sales representative.

Warranty

The sale of General Polymers Brand products is governed by the Standard Terms and Conditions of Sale. Sherwin-Williams has no knowledge or control concerning buyer's use for the product nor over the quality of the concrete or substrate to which they are applied. Sherwin-Williams assumes no responsibility for any loss or damage resulting from the handling or use of the products by the buyers. Sherwin-Williams makes the following **LIMITED WARRANTY** that its products have been supplied free from manufacturing defects, and will conform to Sherwin-Williams manufacturing standards. Technical data furnished is true and accurate to the best of our knowledge; however, no guarantee of accuracy is given or implied.

SHERWIN-WILLIAMS' LIABILITY SHALL NOT EXCEED REPLACEMENT OF OR RETURN OF THE PURCHASE PRICE FOR THE PRODUCTS WHICH IT MAY SELL WHICH MAY PROVE TO BE DEFECTIVE UNDER NORMAL USE AND SERVICE WITHIN ONE YEAR FROM DATE OF SALE AND WHICH UPON EXAMINATION BY SHERWIN-WILLIAMS SHALL DISCLOSE, TO SHERWIN-WILLIAMS' SATISFACTION, TO BE DEFECTIVE. IN NO EVENT SHALL SHERWIN-WILLIAMS BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, BUYERS LOSS OF MATERIAL OR PROFITS, INCREASED EXPENSE OF OPERATION, BODILY INJURY, LOSS OF USE OF PROPERTY, OR DOWNTIME. SHERWIN-WILLIAMS MAKES NO IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE. THE BUYER HEREBY EXPRESSLY WAIVES ANY CLAIM TO ADDITIONAL DAMAGES.

This Limited Warranty shall be governed by and construed in accordance with the internal laws of the State of Ohio without regard to the principles of conflicts of laws. Any controversy or claim arising out of or relating to this Limited Warranty or alleged breach thereof, shall be settled by mediation under the Construction Industry Mediation Rules of the American Arbitration Association. If, within thirty (30) days after service of a written demand for mediation, the mediation does not result in settlement of the dispute, then any unresolved controversy or claim arising from or relating to this Limited Warranty or alleged breach thereof shall be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules and judgment on the award rendered by the arbitrator(s) shall be final and binding on the parties and may be entered in any court having jurisdiction thereof. All such mediation and arbitration shall take place in Cleveland, Ohio. This Limited Warranty supersedes any other warranty or other representation, whether written or oral, hereto made between parties.



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