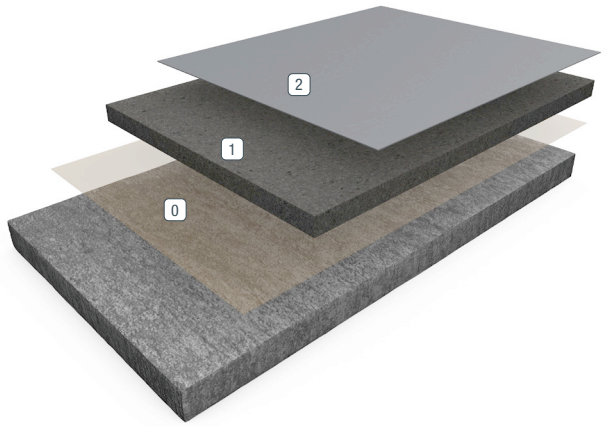
RESUFLOR™ MPE SLURRY EV

7-DAY NMP RESISTANT FLOORING SYSTEM

Sherwin-Williams Resuflor MPE Slurry EV is a high-build (1/16-inch to 1/8-inch), chemical-resistant, protective, self-leveling system that utilizes high-solids binder resins and selected aggregates to produce a resin-rich material that is easily applied with a V-notched trowel or squeegee.



0 **Moisture Vapor Barrier Primer**

1 **Slurry Build Coat with Sand Broadcast**

2 **Slip Resistant/NMP Resistant Topcoat**

BENEFITS

- Chemically resistant to NMP for seven days when tested to ASTM D1308
- High build for heavy traffic areas
- Seamless, easy-to-clean surface
- Durable, wear and slip resistant
- Chemical and stain resistant
- Can be applied to green concrete
- LEED® v4 — Green Building credits available

USES

- EV battery manufacturing facilities
- Production areas
- Clean rooms

TYPICAL PHYSICAL PROPERTIES

Hardness, Shore D ASTM D 2240	70/65
Compressive Strength ASTM C 579	12,000 psi
Tensile Strength ASTM D 307 ASTM D 638	 1,900 psi 6,000 psi
Abrasion Resistance ASTM D 4060, CS-17 Wheel, 1,000 Cycles	11.7 mg/loss Result based on independent lab testing of Resutile™ HTS
Flexural Strength ASTM C 580	4,000 psi
Adhesion ACI 503R	300 psi concrete failure withstands 16 ft lbs
Impact Resistance MIL-D-3134, Sec.4.7.3	Withstands 16 ft lbs without cracking, delamination or chipping
Flammability ASTM D 2240 Adhesion ACI 503R	Self-extinguishing over concrete
Resistance to Elevated Temperatures MIL-D-3134J	No slip or flow at required temperature of 158°F
Chemical Resistance ASTM D1308 Method D	NE: 7 days
Dynamic Coefficient of Friction (DCOF) ANSI A326.3-2017	0.72

INSTALLATION

Sherwin-Williams High Performance Flooring materials shall only be installed by approved contractors. The following information is to be used as a guideline for the installation of the Resuflor MPE Slurry EV. Contact the Sherwin-Williams Technical Service Department for assistance prior to application.

SURFACE PREPARATION — GENERAL

Sherwin-Williams 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 Sherwin-Williams 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 depending upon system selected. 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 Sherwin-Williams Technical Service Department.

TEMPERATURE

Throughout the application process, substrate temperature should be 50°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 off gassing. The material should not be applied in direct sunlight, if possible. Protect material from freezing prior to installation.

APPLICATION INFORMATION — SURFACE PREP PROFILE CSP 3-4

VOC MIXED	APPLICATION STEP	MATERIAL	MIX RATIO	THEORETICAL COVERAGE	PACKAGING
<50 g/L	Moisture Vapor Barrier Primer	MVB	1:1	72 sq ft/gal	3 or 15 gal 165 (drums)
<50 g/L 0 0	Slurry 1/16 in Smooth	MPE 5350 5310-7	2:1 19 lbs Filler	24-26 sq ft/gal	3, 15 or 165 gal 50 lbs 50 lbs
0	Broadcast	5310-8	To Excess	0.6 - 0.8 lbs/sq ft	50 lbs
<100 g/L	Slip- and NMP-Resistant Topcoat	HTS 100	Pre-measured kit	500 sq ft/gal	3 or 15 gal

For additional topcoat options, consult the Sherwin-Williams Topcoat Selection Guide or contact your Sherwin-Williams representative.

GENERAL PRODUCT INFORMATION

Resuprime MVB

Do not apply to new concrete slabs until at least seven days old.

Colorants CANNOT be used in Resuprime MVB.

Resuprime MVB is not a wear surface or topping, it must be topcoated.

Do not apply over a slab while experiencing hydraulic pressure.

Warranty will not apply to Resuprime MVB installed over concrete with Alkali Silica reaction (ASR).

MVER may fluctuate within slab areas and can have significant seasonal variations.

Do not apply over existing coatings, sealer or floor coverings.

Do not apply to concrete slabs with less than 3,500 psi compressive strength. (Consult Sherwin-Williams Technical Services.)

Protect the area to be treated from strong sunlight, wind or drafts during application.

Acid etching and diamond grinding should not be used as a method of preparation.

Cannot be sprayed.

OPTIONS

Colors in Resuflor MPE: Use colorants at a rate of one unit per 3-gallon mix. Standard colorants — White, Yellow and Light Gray will not impart total hide. Use these colorants at a rate of two units per 3-gallon mix. Similar colorants also may not hide as well. Refer to Color Selection Guide.

Colors in Resutile HTS 100: Use colorants at a rate of one unit per 1-gallon mix. Standard colorants — White, Yellow and Sandy Beige will not impart total hide. Similar colorants also may not hide as well. Refer to Color Selection Guide.

LIMITATIONS

Contamination (fisheyes): Product may fisheye if oil, silicones, mold release agents or other contaminants are present.

Chemical Resistance/Staining: Reduced chemical resistance and staining is possible in pigmented versions of the system.

MOISTURE VAPOR BARRIER PRIMER — RESUPRIME MVB

SURFACE PREPARATION

CHECK THE CONCRETE: Concrete must be structurally sound. Concrete can be less than 28 days old.

CHECK FOR MOISTURE: 22-mil application — readings can be up to 100 percent relative internal concrete humidity. Test methods can be purchased at www.astm.org or follow instructions from the suppliers of this test.

NOTE: Although moisture testing is critical, it is not a guarantee against future problems. This is especially true if there is no vapor barrier or the vapor barrier is not functioning properly and/or you suspect you may have concrete contamination from oils, chemical spills or excessive salts. Functioning vapor barrier is required for use.

CHECK THE TEMPERATURE AND HUMIDITY: The ambient and surface temperature must be between 60°F (15.6°C) and 90°F (32.2°C) at the time of application, and temperatures should not rise above this range during application or while the material is curing. Ambient relative humidity percentage should not exceed 80 percent at the time of application.

CONCRETE: Repair and leveling layers containing latex or other components generally prevent absorption and proper bond and should be removed. Surface must be shot blasted to achieve a surface profile of ICRI CSP 3-5 (Int. Concrete Repair Inst.). Grinding or acid etching is not permitted, nor chemical remediation of any adhesive residues.

ENSURE POROSITY: Surface must be clean, completely free of dust, dirt, paint, sealer or any contaminant that might interfere with penetration or bond. Do not apply to floors that have sealers or bond breakers applied unless completely removed. Quick tests to help determine clean, open and absorptive concrete uses water drops. This easy test is particularly important if cores were not pulled and tested. If dime-size water drops placed at several locations on prepared floor do not readily absorb into concrete within 30 seconds or beads up, surface is not sufficiently absorptive. In all cases, thorough vacuuming (with dust containment filter) is needed before application. Cleaning with pressure washer may be advisable in some cases. Leveling should be done on top of Resuprime MVB with suitable repair materials.

JOINTS: Expansion (cold or construction) joints should be left intact. Resuprime MVB is not warranted against structural movement at expansion joints. To help reduce moisture emissions through expansion joints, coat the walls and bottom of the cleaned joint with Resuprime MVB. Once allowed to dry, an expansion joint cover or an elastomeric sealant may be used. For concrete slabs over six months old, sawcut (control) joints and cracks should be filled by pouring Resuprime MVB full depth or to 3/4 of joint depth. If filling to 3/4 depth, pour silica quartz into Resuprime MVB to create a mortar. Sweep away excess sand and proceed with Resuprime MVB installation.

APPLICATION: COVERAGE RATES — apply the balance of Resuprime MVB needed to achieve the desired total thickness. It is important that the coverage rates are consistent. Very rough or porous concrete may require a heavier application. Adjust the rate as needed.

1 gallon (3.78 litres) of Resuprime MVB will cover 72 sq ft (6.7 m^2) @ 22 mils (0.56 mm) wet/dry film

PART A. For larger unit sizes, pour out 2 gallons (7.56 litres) Part A into a measuring container. Then, pour this measured Part A into a 5-gallon mixing pail.

ADD RESUPRIME MVB PART B TO PART A (1:1 VOLUME RATIO). For larger unit sizes, pour out 2 gallons (7.56 litres) Part B into a measuring container that is separate from the one used with the Part A. Then, add the measured Part B to the Part A already in the mixing pail.

MIX FOR FOUR MINUTES using a Jiffy mixer blade and slow-speed drill to produce a streak-free, homogenous product. Care must be taken to mix all the product and avoid any action that might entrap air such as high-speed drill mixing. DO NOT THIN the product.

APPROXIMATE WORK TIME (minutes): °F (°C)

65 (18.3)	70 (21.1)	73 (23.9)	80 (26.7)	90 (32.2)
45 mins	32 mins	20 mins	16 mins	12 mins

IMMEDIATELY POUR ALL OF THE MIXED MATERIAL onto the floor in a single bead.

PUSH THE SQUEEGEE at an even speed and down pressure. The squeegee should be pushed to apply the targeted amount. **NOTE:** Use of a notched squeegee will make it easier to apply a thicker coat. Immediately after the Resuprime MVB is applied and there is room to roll, a second person will **BACKROLL THE MATERIAL** with a short nap roller to a smooth and uniform appearance. **NOTE:** Finish backrolling as soon as possible.

BEFORE PROCEEDING WITH SUBSEQUENT COATS First, thoroughly check Resuprime MVB for any fisheyes or pinholes, which would be a weak point in the membrane. Grind these areas and clean off residue. Make sure the surface is dry. Then, reapply Resuprime MVB to these areas.

APPROXIMATE CURE TIME (hours): °F (°C)

65 (18.3)	70 (21.1)	73 (23.9)	80 (26.7)	90 (32.2)
11 hrs	9 hrs	7 hrs	6 hrs	4 hrs

Sherwin-Williams epoxies bond to Resuprime MVB if coated within 24 hours. Resuprime MVB must be cured (hard) enough so spikes worn to apply epoxy or other recoat activities do not damage Resuprime MVB.

BUILD COAT — RESUFLOR-MPE SLURRY 1/16-INCH SMOOTH

COVERAGE RATE: 1 gallon of Resuflor MPE will cover 106 sq ft at 15 mils wet/dry film.

PREMIX PART A using a Jiffy® mixer blade and slow-speed drill. (This is required for both 3-gallon and full-filled 5-gallon units.) For full-filled 5-gallon pails, pour out 2 gallons into a measuring container. Then, pour the measured Part A into a mixing pail.

ADD RESUFLOR MPE PART B TO PART A (3 GALLONS TOTAL MIX). For full-filled 5-gallon pails, pour out 1 gallon Part B into a measuring container that is separate from the one used with the Part A. Then, add the measured Part B to the Part A already in the mixing pail.

COLORS: Premix colorants to ensure uniform color. Colorant is added at the rate of one unit per 3-gallon mix. NOTE: When using colorant in the bulk units, add the colorant to the Part A that has been measured into the "mixing pail."

POTLIFE: Mix only enough material that can be applied within the work time (time between the addition of Part B to Part A and the completion of all application actions). Check the following chart for work times at various temperatures. For smaller quantities, use two parts PART A to one part PART B by volume.

MIX FOR 2 MINUTES using a Jiffy mixer blade and slow-speed drill. (Failure to do so could result in lower/diminished coating properties.) **SLOWLY ADD** up to 6 lbs of 5350 Resuflor filler and up to 13 lbs of 5310-7 Dry Silica per 1.5 gallons of mixed epoxy. Mix with low-speed drill and Jiffy blade for three minutes until uniform and no lumps remain. NOTE: 1 gallon of unpacked 5350 is approximately 6 lbs; 1 gallon of unpacked 5310-7 is approximately 13 lbs.

IMMEDIATELY POUR ALL OF THE MIXED MATERIAL onto the substrate and pull out using a 1/4-inch V-notched trowel or 1/4-inch red rubber squeegee.

ALLOW MATERIAL TO SELF-LEVEL 10-15 MINUTES. The surface should then be lightly backrolled with a looped roller to help smoothen. Use a spiked roller to aid in the release of air. Broadcast 5310-8 Dry Silica Sand (20-40 mesh) to excess into wet material so no wet material is visible. Aggregate should be broadcast within one (1) hour of liquid application to ensure it is properly seated. NOTE: The floor's finished appearance depends on the mannerin which the aggregate has been applied. Toss the aggregate upward, allowing it to fall gently onto the wet surface in an even dispersion.

DO NOT THROW OR AIM DOWNWARD AT A SHARP ANGLE USING FORCE.

Allow to cure. Cure times vary depending on environmental conditions. Sweep off excess aggregate with a clean, stiff bristled broom. Clean aggregate can be saved for future use. All imperfections such as high spots should be smoothed before the application of the seal coat.

If Resuflor MPE is topcoated with Resutile HTS 100 at floor temperatures of 65°F-90°F, it does not need to be sanded if applied within 24 hours. If epoxy is not coated within 24 hours, it must be sanded with 80-grit paper. The use of more aggressive paper will introduce deep grooves that will not be covered by a single, thin coat of urethane; swirl marks will be particularly evident in a topcoat that is glossy. We recommend thorough sanding with a swing-type buffer so that multiple scratch marks cause an obvious gloss loss on all areas (depressions will remain shiny), and the floor is uniformly dulled. The ability to see individual scratch marks is an indication that sanding is not adequate. Scrub with detergent and rinse with clean water before coating and tack rag to remove fine dust.

SLIP- AND NMP-RESISTANT TOPCOAT — RESUTILE HTS 100

PREMIX PART A FOR THREE MINUTES USING A JIFFY MIXER BLADE with slow-speed drill. **POTLIFE:** Mix only enough that can be used in a two-hour period. **NOTE:** Once opened, this material cannot be resealed for later use.

COLORS: Premix colorant before adding to Resutile HTS 100 to ensure uniform color. Add colorant to Resutile HTS 100 Part A and mix using a Jiffy mixer blade and slow-speed drill. Use colorants at a rate of one unit per 1-gallon unit of Resutile HTS 100.

POUR PART C INTO PART A while mixing. **CONTINUE TO MIX AND ADD PART B. MIX FOR THREE MINUTES** using a Jiffy mixer blade and slow-speed drill. Pour into application tray.

APPLY RESUTILE HTS 100 at the rate of 500 sq ft/gallon with a 3/8-inch nap roller. For proper appearance and development of physical properties, it is crucial that material is not applied above or below this rate. Dip the roller in the coating and lightly roll out excess in the application tray. Apply two 8- to 10-foot-long paths on the concrete, making one stroke left to right and one right to left. Rewet the roller and apply two more paths adjacent to the first pair. Rewet roller and apply a third pair adjacent to the second.

SPREAD THE MATERIAL evenly with V-shaped cross passes. **MAKE SURE THE FLOOR HAS JUST ENOUGH COATING TO COVER EVENLY.** Excess material could cause the floor to blister, especially in high humidity. Insufficient material will cause the floor to look non-uniform. **LEVEL THE AREA** with straight passes that cross the initial material paths. These final strokes will reduce roller marks. If the appearance is not satisfactory, reroll the area.

REMIX THE MATERIAL in the tray occasionally (with the roller) to prevent settling of the Part C (filler). NOTE: When multiple applicators are used to apply material, inconsistencies between areas may result. To ensure a more uniform finish, an individual outfitted with spiked shoes may finish by pushing or pulling a roller across all applicator areas.

ALLOW COATING TO DRY 24 HOURS at 75°F, 50 percent relative humidity before opening to light traffic. Allow more time at low temperatures, low humidity or for heavier traffic. Full coating properties take 14 days to develop.

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 PRECAUTIONS

Refer to the SDS sheet before use. Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

MATERIAL STORAGE

Store materials in a temperature controlled environment (40°F to 90°F) and out of direct sunlight.

Keep resins, hardeners and solvents separated from each other, and away from sources of ignition.

MAINTENANCE

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

DISCLAIMER

The information and recommendations set forth in this document are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication.

Consult www.sherwin-williams.com/resin-flooring to obtain the most recent Product Data information and Application instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams.

NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

THE SHERWIN-WILLIAMS DIFFERENCE

Sherwin-Williams High Performance Flooring delivers world-class industry subject matter expertise, unparalleled technical and specification service, and unmatched regional commercial team support to our customers around the globe.

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