

FASTOP® ADVANCED NMP PERFORMANCE EV

14-DAY NMP RESISTANT FLOORING SYSTEM

Sherwin-Williams FasTop Advanced NMP Performance EV

is a self-leveling urethane concrete applied at 3/16-inch thickness and broadcast to yield a 1/4-inch finished system. In challenging new construction environments, the system can be installed in temperatures as low as 40°F over newly poured concrete. It cures quickly, serving as a highly effective moisture barrier and build coat, while simultaneously resisting exposure to NMP.

BENEFITS

- High chemical resistance, including up to 14 days exposure to NMP when tested to ASTM D1308
- Can be applied to green concrete
- Rapid return to service
- Excellent abrasion resistance
- Low temperature cure
- Will not lose bond due to thermal shock
- Impact resistant
- Moisture insensitive
- No moisture testing required
- LEED® v4 – Green Building credits available

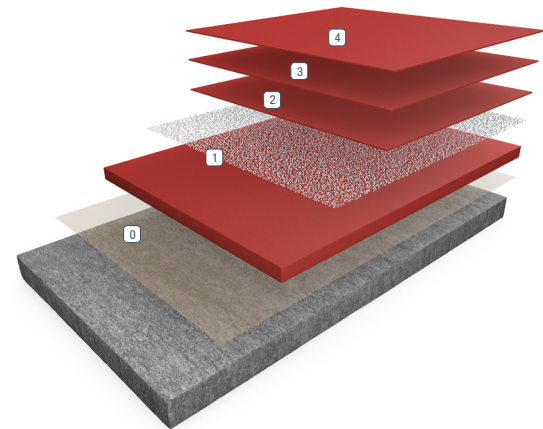
LIMITATIONS

- Protect material from freezing

USES

- EV battery manufacturing facilities
- Formation, cell assembly and cathode operating areas
- Areas with high NMP chemical attack
- Waste and chemical storage areas

DESIGNED TO PERFORM



- 0 **Optional Primer**
- 1 **Moisture Tolerant Build Coat with Full Broadcast 20/40 Mesh Silica Sand**
- 2 **Grout Coat**
- 3 **NMP Resistant Topcoat**
- 4 **NMP, Slip and Abrasion Resistant Topcoat**

TYPICAL PHYSICAL PROPERTIES

Abrasion Resistance ASTM D 4060, CS-17 Wheel, 1,000 cycles	11.7 mg/loss Result based on independent lab testing of Resutile™ HTS
Hardness, Shore D ASTM D 2240	83
Tensile Strength ASTM C 307	944 psi
Compressive Strength ASTM C 579	6,926 psi
Flexural Strength ASTM C 580	1,909 psi
Adhesion ASTM D 7234	Lower concrete failure
Impact Resistance	IR4
Reaction to Fire	Bfl – s1
Thermal Expansion Coefficient	<38 PPM
Service Temperature at 3/16-inch	-50°F to 266°F
Shrinkage	Nil
Water Absorption	Karsten Test (Impermeable) – Nil
Cure Time	Recoat 3-5 hours Foot traffic 7-8 hours Full service 12 hours
Dynamic Coefficient of Friction (DCOF) ANSI A326.3 -2017	0.72
Chemical Resistance ASTM D1308 Method B	NE; 14 days

INSTALLATION

The following information is to be used as a guideline for the installation of the FasTop Advanced NMP Performance EV System. 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 equal to CSP 4-6. Refer to Form G-1. Consult the Sherwin-Williams Technical Service Department if oil or grease is present.

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 Sherwin-Williams system filler.

For recommendations, consult the Sherwin-Williams Technical Service Department.

LIMITATIONS

The substrate must be structurally sound and cleaned of any foreign matter that will inhibit adhesion. Do not apply in temperatures below 40°F or above 90°F or when relative humidity is greater than 80 percent. If substrate is not concrete, wood or metal as described in Surface Preparation (Form G-1), then do not apply. Call the Sherwin-Williams Technical Service Department for recommendation. Working time is reduced with air movement and high humidity. When installing FasTop® Multi Topfloor SL45, if encountering concrete outgassing, please discontinue installation and apply 3477 Epoxy Water Emulsion Primer/Sealer. Allow to dry until tack-free and proceed with the FasTop Advanced NMP Performance EV System installation.

- Do not featheredge.
- Do not mix partial units.
- Do not hand mix. Do not let mixed material sit in a bucket, even a two- to three-minute delay in pouring will reduce working time.
- To install outside, contact the Sherwin-Williams Technical Service Department.

Full chemical resistance is achieved after a seven-day cure. Consult the Sherwin-Williams Technical Service Department for specific chemical resistance.

If using without broadcast media, primer is required.

APPLICATION INFORMATION — SURFACE PREP PROFILE CSP 4-6

VOC MIXED	APPLICATION STEP	MATERIAL	MIX RATIO	THEORETICAL COVERAGE	PACKAGING
<50 g/L 0	Optional Cove Base	FasTop Multi Cove Base Aggregate	2.0 kg Mix (A+B) 30 lbs	15-20 linear ft @ 6" cove 1" radius 30 lbs	2.0 kg Sold Only in 30-lb Units
<75 g/L	Optional Primer	3477	2:1	250 sq ft/gal	3 or 15 gal
<50 g/L 00	Moisture Tolerant Build Coat -Slurry	FasTop Multi SL45 Aggregate	5.0 kg Mix (A+B) 37 lbs to Excess	32-34 sq ft/Unit @ 1/4" 28-30 sq ft/Unit @ 3/16"	5.0 kg 37 lbs
0	Broadcast (Standard)	5310 Dry Silica Sand 20-40 Mesh	N/A	500 lbs/1,000 sq ft	50 lbs
<50 g/L	Grout Coat	MPE	2:1	100 sq ft/gal	3, 15, 165 or 750 gal
<50 g/L	NMP Resistant Topcoat	HPS 100	Pre-measured kit	500 sq ft/gal	0.94 or 4.7 gal
<100 g/L	NMP-, Slip and Abrasion Resistant Topcoat	HTS 100	Pre-measured kit	500 sq ft/gal	1.09 or 5.5 gal

OPTIONAL COVE BASE

MIXING AND APPLICATION

Cove base should be installed prior to the floor. Tape out cove with duct tape or a good quality masking tape. Terrazzo strips will also work.

MIXING: Do not mix partial units, the fine aggregate and pigment can and will separate. A drill and a paddle work the best, but a KOL mixer works well also. Mix 1.0 kg of Part A with one color pack until uniform. Add 1.0 kg of Part B and mix. Slowly add aggregate and mix until thoroughly wet out. Immediately pour mixed material out of bucket, in a bead, next to the wall. Rough apply cove mortar using a trowel. Do not worry about trowel marks at this time; just get all the mixed material applied to the wall. Material will need to be finished within approximately 20 minutes depending on temperature. Placing a halogen light next to cove base will cast shadows and assist on finishing the cove base with minimal waves and/or trowel marks. Use a minimum of a 3/4-inch radius cove trowel and finish cove base. Any smaller may result in a loss of the radius once the floor is tied in. Lightly misting cove trowel with window cleaner, as a trowel lube, works well. Do not use isopropyl alcohol. Carefully remove tape and finish rough edges. Install floor once cove is hard to the touch, about two-and-half to three hours.

REQUIRED TOOLS:

Drill, proper mixing paddle, 3-inch by 8-inch trowel works best to apply, margin trowel, and a radius cove trowel. Minimum of 3/4-inch but 1-inch is preferred.

PRIMER — OPTIONAL

MIXING AND APPLICATION

Premix 3477A (resin) and 3477B (hardener) separately, using a low speed drill and Jiffy® blade. Mix for one minute and until uniform, exercising caution not to whip air into the materials.

Add 2 parts 3477A (resin) to 1 part 3477B (hardener) by volume. Mix with low speed drill and Jiffy blade for three minutes and until uniform. DO NOT mix more material than can be used within 4 hours. Apply material with a short nap roller at a spread rate of 250 sq ft per gallon.

DO NOT ALLOW TO PUDDLE. Any uneven or textured surfaces will require more material than an even surface.

Proceed when tack-free, one to four hours on shot-blasted concrete.

MOISTURE TOLERANT BUILD COAT AND BROADCAST — FASTOP MULTI SL45

MIXING AND APPLICATION

Add 2.5 kg Part A (resin) with one color pack. Mix until uniform. Add 2.5 kg Part B and mix with low-speed drill and Jiffy mixer until uniform.

Pour one bag, 37-lbs pre-measured unit, into container and mix until no lumps remain. Immediately pour mixed material onto the substrate and pull out using a pin rake, screed rake or flat trowel. Place all material within 15 minutes. Back roll with a spike roller to assist leveling. Allow material to self-level (two to five minutes).

NOTE: At substrate temperature less than 40°F, the application will be adversely affected.

Broadcast 5310 Dry Silica Sand (20-40 Mesh) to saturation (about 500# per 1,000 square feet).

Allow to cure for a minimum of three to five hours prior to topcoating. Sweep off excess aggregate with a clean, stiff bristled broom. Clean sand can be saved for future use. All imperfections such as high spots should be smoothed before the application of the topcoat.

NOTE: The broadcast distribution is critical to the success of the application. The floor's finished appearance depends on the manner in which the aggregate has been applied. 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.

GROUT COAT — RESUFLO MPE

COVERAGE RATE: One gallon of Resuflo MPE will cover 100 sq ft at 12 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 RESUFLO 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. **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.

APPROXIMATE WORK TIME

65°F	70°F	73°F	80°F	90°F
40 min	30 min	25 min	20 min	15 min

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.”

BACKROLL THE MATERIAL with a 3/8-inch nap roller for a smooth uniformed appearance. Backrolling is required to remove the puddles and squeegee lap marks in order to obtain uniform texture and a consistent mil thickness. **NOTE:** Get off the Resufloor MPE as soon as possible.

If Resufloor 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.

NMP RESISTANT TOPCOAT — RESUTILE HPS 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 Sherwin-Williams colorant before adding to Resutile HPS 100 to ensure uniform color. Add colorant to Resutile HPS 100 Part A.

ADD PART B while mixing.

MIX FOR THREE MINUTES using a Jiffy mixer blade and slow-speed drill. Pour into application tray.

APPLY RESUTILE HPS 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 the 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.

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.

NMP-, SLIP- AND ABRASION 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.

CLEAN UP

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

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 your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

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.

United States & Canada

sherwin-williams.com/resin-flooring
swflooring@sherwin.com