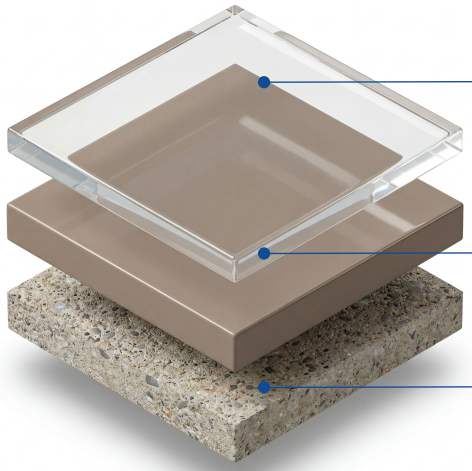
MAVCRETE UM-SL SYSTEM GUIDE



TOPCOAT: **MAVSEAL-UPA CLEAR OR PIGMENTED**

OVERLAY Slurry: **MAVCRETE UM-SL, PIGMENTED**
Optional COLORED QUARTZ BROADCAST

PREPARED SUBSTRATE: **CSP 3 - 5**

NOTE: PLEASE READ AND REVIEW THESE INSTRUCTIONS PRIOR TO INSTALLATION OF THE COATING SYSTEM. OTHER **MAVERICK** PRODUCTS MAY BE USED AS ALTERNATIVE PARTS OF THIS SYSTEM. CONTACT **MAVERICK** TECHNICAL SUPPORT AT SALES@MAVTECHSOL.COM OR 313-889-2526.

DESCRIPTION

MAVERICK MAVCRETE UM-SL is a self-leveling urethane cement. This heavy-duty flooring system is typically installed at 3/16" and broadcast to rejection with **Colored Quart** to achieve 1/4" total thickness and a slip-resistant texture suited for wet environments subject to thermal shock. This featured system locks in the broadcast with a polyaspartic, which provides UV stability and chemical resistance.

Mavcrete UM-SL also has moisture control properties and can withstand moisture vapor transmission up to 20 lbs./1,000 sq. ft. in 24 hours as measured by calcium chloride using ASTM F1869 or 99% RH as measured by in-situ relative humidity using ASTM F2170.

PRODUCT INFORMATION

PRODUCT NAME	SIZE
Urethane Cement Part-A	0.5-Gallon
Urethane Cement Part-B	0.5-Gallon
Urethane Cement Part-A	5-Gallon Pail
Urethane Cement Part-B	5-Gallon Pail
Urethane Cement Part-A	250-Gallon Tote
Urethane Cement Part-B	250-Gallon Tote
SF Filler	35-lb. Bag

PRODUCT NAME	SIZE
MavTint Pigment Red	1-lb. Bag
MavTint Pigment Gray	1-lb. Bag
MavTint Pigment Dark Gray	1-lb. Bag
Colored Quart	40 lb. Box
Mavseal-UPA Slow Cure Kit	5-Gallon Clear / Gloss
Mavseal-UPA Part-B	5-Gallon Clear / Gloss
Mavseal-UPA Slow Cure Part-A	5-Gallon Clear / Gloss

A bag mix of Mavcrete CB is pigmented with 1/2 bag of MavTint Pigment.
A bag mix of MavCrete UM-SL is pigmented with 1 bag of MavTint Pigment. The color options are: Red, Gray, and Dark Gray.

COVERAGE RATES

PRODUCT NAME	MIX	THICKNESS	COVERAGE RATE
Mavcrete CB	1 qt. Part-A + 1 qt. Part-B + 1 Bag Filler + 1/2 Bag Pigment	1/8 - 3/16 inches	35 Lineal ft. for a 4 inch high cove.
MavCrete UM-SL	1/2 gal Part-A + 1/2 gal Part-B + 1 Bag Filler + 1 Bag Pigment	3/16 inch, 1/4 inch after broadcast	23 sq. ft.
Colored Quart	N/A	N/A	6 sq. ft./lb. or 240 sq. ft. per 40 lb. box
Mavseal-UPA Slow Cure	1 gal Part-A + 1 gal Part-B	12 - 16 mils	100 - 134 sq. ft./gal.

PHYSICAL PROPERTIES

TEST NAME	TEST METHOD	RESULT
Bond Strength	ASTM D-4541	100% Concrete Failure
COF (Wet DCOF)	ANSI 326.3	> .63
Compressive Strength	ASTM C579	8,400 psi
Flammability	ASTM D695	Self extinguising over concrete
Flexural Strength	ASTM C580	2,700 psi
Gloss	D523	92 - 95
Impact Strength	ASTM D4226	> 160 in./lbs.
Resistance to Fungi Growth	ASTM D4226	Passes, Rating of 1
Taber Abrasion (CS-17 Wheel, 1000 g Load, 1000 Cycles)	ASTM D4060	30 mg loss
Tensile Strength	ASTM G21	1,050 psi
UV Resistance (Gloss after 1000 hours in QUV)	ASTM G154	87 - 89
VOC	EPA (Method 24)	5 g/L

CHEMICAL RESISTANCE

CHEMICAL	RESULTS	CHEMICAL	RESULTS	CHEMICAL	RESULTS
10% Acetic Acid	G	Methyl Ethyl Ketone	E	Betadine	E
Vinegar	G	Xylene	E	Bleach	E
10% Citric Acid	G	Ethylene Glycol	E	Urine	E
10% Hydrochloric Acid	G	Isopropyl Alcohol	E	Coffee	E
30% Hydrochloric Acid (muriatic)	G	Mineral Spirits	F	Cola	E
10% Nitric Acid	NR	Brake Fluid	E	Ketchup	E
50% Phosphoric Acid	F	Transmission Fluid	E	Mustard	G*
10% Sulfuric Acid	F	Motor Oil	E	Red Wine	E
37% Sulfuric Acid	F	50:1 Gas/Oil Mixture	E	*Stain is only defect.	
70% Sulfuric Acid	F	E85 Gasoline	E		
20% Ammonium Nitrate	E	E95 Gasoline	E		
20% Sodium Chloride	E	Unleaded Gasoline	E		
50% Sodium Hydroxide	G	Skydrol	E		

Chemical resistance was tested on fully cured material (after 5 days minimum).

KEY	
E = Excellent	G = Good
F = Fair	NR = Not Recommend

SURFACE PREPARATION

Surfaces to be covered must be sound, clean, dry and free of contaminants such as dirt, dust, grease, oil, silicones and other contaminants that may negatively affect adhesion. Scrub area with detergent and rinse clean to remove any contaminants. Remove paint or coatings.

CONCRETE / CONCRETE BLOCK: New concrete should be cured for a minimum of 14 days and reach a minimum 3,500 psi compressive strength to reduce possible shrinkage cracking in the concrete and allow for proper surface preparation. However, early curing movement, shrinkage or cracking that may occur in the concrete will be reflected through the **Mavcrete**. Concrete should have a minimum pull-off strength of at least 300 PSI per ASTM D4541. Remove any laitance or weak surface layers including broom finished concrete surfaces. Diamond grind walls to a CSP-3 surface profile. Refer to SSPC-SP13/NACE 6 or ICRI Technical Guideline No. 310.2. Mechanically prep floors to CSP 3-5 to meet ICRI standard guideline #03732 for coating concrete, producing a profile equal to 40-grit sandpaper or coarser.

CEMENT BOARD WALLS: Sand – Do Not diamond grind cement board.

Vacuum debris from wall and floor.

SAFETY & TECHNICAL

Refer to the SDS sheet before use. Safety precautions must be strictly followed during storage, handling, and use. Personal Protective Equipment (PPE) should be worn at all times. PPE will include (but is not limited to): Safety glasses with side shields, high-quality nitrile gloves, and properly fitted NIOSH approved respirators. To acquire additional information or technical and safety data, please visit: maverickperformancesolutions.com.

TEMPERATURE

Air	40° - 85°F	4° - 29°C
Surface	40° - 85°F	4° - 29°C
Material	60° - 80°F	16° - 27°C

Mavcrete products can be applied at cool conditions down to 40°F.
For temperatures below 60°F, use Mavseal-UPA Fast Cure.

SET-UP & MIXING AREA

Place the mixing area as close to the project area as possible. Cover mix area with plastic, a tarp, or cardboard and securely tape to the floor. Assemble all necessary application tools, safety supplies & PPE, and clean-up supplies and place in the mixing area prior to starting the application process.

TAPE AND TERMINATION POINTS: Apply masking tape to all perimeter areas where the coating system will terminate. Sawcut and key-in all termination points at doorways, joints, and around drains, dock plates, and high traffic impact points (see **Maverick** Drawings/ Architectural Details). To prevent lifting or delamination, keyways (minimum 5/16" wide x 5/16" deep) must be cut.

PATCHING

Cracks, holes, eroded & spalled areas of the floor that will not cover, should be skim-coated with Mavcrete UM-SL. Scrape patch material flush with surface. Areas deeper than 1/4" need to be patched with a cementitious material and prepared as above.

JOINTS

Honor all isolation, expansion, and movable joints with the appropriate joint material after the coating system is installed. Contraction (sawcut) joints may be filled and coated over; However, the coating system may crack over time if the slab experiences excessive shrinkage or movement (see **Maverick** Drawings/Architectural Details).

APPLICATION EQUIPMENT

Assemble all required application equipment. Equipment will include (but is not limited to):

- Drill and Jiffy® type mixing blade
- High quality non-shed 3/8" nap roller covers
- Edge rollers & chip brushes
- Painters' tape
- Duct tape
- High quality flat & notched EPDM squeegees
- Spiked shoes
- Measuring and mixing containers
- Cam rake or trowel
- Spike roller
- Loop/Texture roller
- Cove strip (plastic or metal Schlueter strip) if specified.
- Tape measure, ruler, and marker to measure and mark proper cove height
- Chalk line to mark height of cove base to be installed. Some floors may require a string level if floor is pitched.
- Cove strip (plastic or metal Schlueter strip) if specified.
- Flat stainless steel trowels, radius cove trowels, margin trowels, and assorted concrete finishing tools (corner tools etc.).
- Acetone for clean-up and trowel lubrication.
- MAN-U-FAB M-61 (1 HP) mixer with a 10 gallon pail and TR4-10 mixing arm (www.mixall.com).

APPLICATION PROCEDURE

MAVCRETE CB: COVE PART-A

Installation of cove base may be performed before or after placement of a Mavcrete flooring system, but installing the cove first, will provide a smoother transition. Mavcrete CB can be used to create a 45 degree cant cove.

Apply duct tape to top of cove strip or wall termination (4" height is standard) to protect cove strip and wall. Apply duct tape on floor approximately 1.5 – 2" from wall to identify area to receive primer and cove base.

Primer: Mavcoat Epoxy Primer must be applied prior to **Mavcrete CB** for the cove to hang on the wall. Mix 1 Part Part-A to 1 Part Part-B by volume for 3 minutes and prime wall area using a small roller and/or brush. Primer may require multiple coats on porous surfaces. Fumed silica may be used to thicken primer if desired.

Do not install cove base to an unprimed wall or a primer that has soaked into the wall. Use caution not to apply the primer too thick, as primer may sag and puddle at base of wall. Roll out or remove any areas of excess primer.

1. Pour 1 quart (.25 gallons) of Mavcrete Part-A liquids into a measuring container.
2. If pigmenting, add 1/2 **MavTint Pigment** Bag to the Part-A and mix for 15 seconds.
3. Add 1 quart (.25 gallons) of Mavcrete Part-B liquids to the Mavcrete Part-A and mix for 15 seconds.
4. Transfer mixed material into a clean mixing bucket or mortar mixer and add the Mavcrete Part C. Mix until the material is completely wet and uniform (1-2 minutes).
5. Pour the mixed material in a straight line along the base of the wall to receive the cove.
6. Using a flat trowel or margin trowel, scrape the material up the wall @ approximately 1/8"-3/16" thickness, taking care not to apply too thick (especially at the base of the cove). If the material is too thick, it will be more difficult to trowel.
7. Once area is sufficiently covered, compact and finish area with cove trowel leaving a 3/16"-1/4" terminating edge on the floor.
8. Acetone can be used to lubricate and clean trowels if they get sticky during application.
9. Remove tape from top of cove and floor, and lightly brush top edge and rough areas of cove with acetone to remove imperfections.
10. Snap a chalk line, cut and scrape excess mortar to achieve a clean transition edge where flooring system will meet the cove base 1.5"-2" from the base of the wall.
11. Scrape loose material from floor and clean-up work area.

MAVCRETE UM-SL: OVERLAY AND BROADCAST

The following installation summary is for reference only and should only be installed by trained persons experienced in polyurethane concrete flooring applications. Since it is unlikely to completely cover the overlay with a single broadcast, tint Mavcrete with a similar color that is in the COLORED QUART blend. Use Red, Gray, or Dark Gray Mavcrete to provide the best background for the flake blend.

1. It is very important to utilize a proper mixer and paddle to ensure a complete mix and to reduce the risk of introducing excessive air into the mixture.
2. With the mixer running, pour ½ Gallon Part-A into the pail.
3. If pigmenting, add 1 **MavTint Pigment** bag to Part-A and mix about 15 seconds.
4. Add ½ Gallon Part-B and mix another 15 seconds.
5. Gradually add all contents of a MavCrete UM-SL Filler bag into the liquid mixture and blend thoroughly until all particles are wetted out, normally about two minutes.
6. Immediately after mixing (within 3 minutes), spread the mixed **Mavcrete** onto the floor at the desired thickness, using a cam rake or trowel. Approximately 3/16" for a 1/4" finished floor after broadcast.
7. Lay abutting edges within 10 minutes to ensure a clean edge. A "wet edge" installation is imperative during large placements to avoid lines and ridges in the finished floor.
8. Evenly apply to desired thickness while trying to keep cam rake lines to a minimum. Back-roll across slurry with spike roller to help settle filler and blend cam rake lines. Further roll with loop/texture roller perpendicular to cam rake lines over entire floor to even and settle slurry prior to broadcasting.
9. Broadcast to rejection with **Colored Quart** onto the wet slurry. Do not broadcast onto the wet edge area until settling and back-rolling is complete. Continue broadcasting until no wet areas remain. Coverage rate for colored quartz is approximately 6 sq. ft./lb.
10. After curing (approximately 6-8 hours to withstand foot traffic), vacuum excess colored quartz from the floor. Being careful not to damage the coating or the quartz, the floor can be gently scraped with a floor scraper to remove any loosely bonded quartz.
11. Apply specified topcoat to lock system and achieve desired slip resistance.

APPLICATION PROCEDURE (CONT.)

MAVSEAL-UPA SLOW CURE: TOPCOAT

Slow Cure mix ratio is 1 Part Part-A to 1 Part Part-B by volume.

1. Pre-mix Part-A for 1 minute. Add Part-B and mix for three minutes until uniform. Do not mix more material than can be applied in 10 – 15 minutes (material will stiffen or tack-up). Mix full kits only.
2. Using a flat or notched rubber squeegee (depending upon DFT required) with EPDM rubber blade, apply at a spread rate of 100 – 134 sq. ft. per gallon to yield 12 – 16 wet film thickness. Use a non-shed 3/8" roller for back-rolling.
3. In hot or humid conditions, apply via 18" roller in a dip and roll method from a roller pan as increased heat and humidity will decrease the working time of the material.
4. This material will cure faster with exposure to moisture in the air.
5. To avoid visible differences in texture or mix-to-mix "tie-ins" do not exceed 5 – 10 minutes from one mix to another.
6. Use joints as natural breaks to divide sections of the floor.
7. If less texture is desired, apply a second coating of 6 – 8 mils (no more than 200 sq. ft. per gal.) on top of the previous coat within 24 hours.

Applying thicker than recommended, allowing material to pool, or rolling into late may leave a white, hazy appearance.

CLEAN UP & DISPOSAL

Clean up mixing and application equipment immediately after use. Use acetone, or xylene; do not use alcohol. Follow solvent manufacturer's safety instructions. Be sure to follow all local, state, and federal regulations when disposing of materials.

MAINTENANCE

To maintain the appearance and extend the life of the newly sealed surface, it is imperative to have a routine maintenance program. Dirt and debris that is tracked over a finished floor will quickly scratch and dull the surface. Place walk-off mats at entrances. Sweep and mop/scrub floors regularly using soft bristles/pads and a mild cleaner. Some cleaning products and equipment or improper use of these can damage a surface. Remove spills quickly to minimize damage and/or stains. For systems that support parked vehicles or other heavy items on rubber wheels, place a small piece of nonporous material, such as sheet metal or plexiglass between the tires and floor to prevent tire marks. Reapplication may be necessary in heavy traffic areas.

LIMITATIONS

⚠ Do not apply at temperatures or thicknesses not recommended. Do not delay in pouring mixed material onto the floor. Do not make partial mixes. Do not invert epoxy pails to drain. Do not apply over loose or unsound concrete, asphalt or bitumen substrates, glazed tile or nonporous brick and tile, magnesite, copper, metal, polyesters, or elastomeric membranes. Moving joints and shrinkage cracks may reflect through system. Joints that are designed to move may reflect through the finished flooring system if they are not honored. Tire marking may occur.

SHELF LIFE & STORAGE

12 months from date of manufacture when stored indoors in the original unopened container at 60°F – 85°F (16°C – 29°C) in a dry location with humidity below 65%.

⚠ Do not allow materials to freeze.

LIMITED WARRANTY

Maverick warrants this product to be free from defect in the material that affects its performance for a period of one year (from date of purchase). **Maverick** will replace at no charge the quantity of the coating that **Maverick** determines has failed to perform, as the sole and exclusive remedy for any breach of this warranty and/or any other defect or failure of the coating. Proof of purchase is required. Cost of labor for application of any product specifically is excluded. Warranty is void if **Maverick** products are mixed with or used in conjunction with materials that are substituted for **Maverick** products. Warranty is nontransferable.

TECHNICAL ASSISTANCE

Information is available by calling **Maverick**
313-889-2526

MAVERICK
PERFORMANCE SOLUTIONS

CORPORATE OFFICE:
Maverick Performance Solutions
25911 Northline Commerce Drive, Suite 306
Taylor, MI 48180
313-889-2526

SYSTEM GUIDE: 10/10/2026

Disclaimer: *All information provided by **Maverick** Performance Solutions LLC concerning **Maverick** products, including but not limited to, any recommendations and advice relating to the application and use of **Maverick** products, is given in good faith based on **Maverick**'s current experience and knowledge of its products when properly stored, handled, and applied under normal conditions in accordance with **Maverick**'s instructions. In practice, the differences in materials, substrates, storage and handling conditions, actual conditions and other factors outside of **Maverick**'s control are such that **Maverick** assumes no liability for the provision of such information, advice, recommendations or instructions related to its products. The uses of **Maverick** product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s).*

***Maverick** reserves the right to change the properties of its products without notice. All **Maverick** product(s) are subject to its current terms and conditions of sale which are available by calling (313) 889-2526.*