

Smith's

System Application Guide

SHOP FLOOR

Aggregate Broadcast Coating System

1/16" (60 MIL AVE.) SINGLE BROADCAST QUARTZ SOLID COLOR EPOXY SYSTEM

SHOPFLOOR-EPOXY-PDS-072522

DESCRIPTION: Smith's Shop Floor system is a 1/16" finished thickness solid color textured seamless floor coating system with optional cove which can be utilized with different resinous product matrix' to suspend the full broadcast 40 Mesh Quartz aggregate.

This system application guide refers to using [Smith's Epoxy U100](#) or [Smith's Epoxy FC125](#) as the body coat to receive the broadcast, although other products may be used in different situations or when faster curing may be necessary.

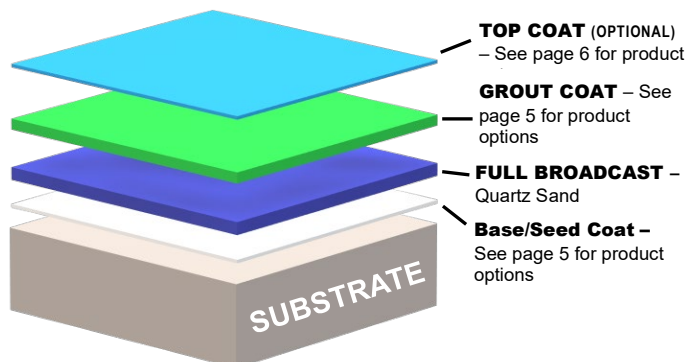
Various textures may be achieved depending on how smooth or course of a surface is desired. Optional topcoats may be utilized for higher chemical or abrasion resistance needs as well as gloss or low sheen finishes.

RECOMMENDED USES:

- Kennels & Veterinary environments
- Automotive Service Areas
- Car Washes
- Commercial Kitchens (*Non-Thermal Shock risk areas*)
- Loading Docks
- Mechanical Rooms
- Food & Beverage – Canning, Bottling, & Distribution
- Educational Environments – Laboratories, Locker Rooms, Restrooms, Pool Decks & more
- Medical/Pharmaceutical – Laboratories, Locker Rooms, Water Therapy rooms, Restrooms, Corridors and more

HIGHLIGHTS:

- Durable & Abrasion Resistant
- Decorative
- Seamless & cove optional
- Easy to clean
- Chemical Resistant
- Low Odor & Low VOC
 - Complies with VOC regulations for industrial maintenance coatings in the OTC & SCAQMD regions
- Meets FDA & USDA standards for flooring
- Overnight return to service
- Available in all standard [Smith's ISC Industrial Solid Colors](#)



CURED COATING PROPERTIES (DRY FILM):

Property	Test Method	Results
Abrasion Resistance, mg/loss *Taber Abraser	ASTM D4060	*See Topcoat Options
Compressive Strength, psi (MPa)	ASTM D695	13,000 psi (89.7 MPa)
Flexural Strength - psi (MPa)	ASTM D790	6,500 psi (44.8 MPa)
Tensile Strength, psi (MPa) – Adhesion to Steel	ASTM D2370	8,586 psi (59.2 MPa)
Adhesion to Concrete	ASTM D4541	Concrete Fails
Impact Resistance -Tested on concrete block	ASTM D3134	Pass
	ASTM D2794	160 in.lbs.- no delamination/chipping
Shore D Hardness	ASTM D2240	85 to 90
Hardness (Pencil)	ASTM D3362	2H
VOC's - Volatile Organic Compounds	ASTM D3960	Varies based on Topcoat options
Water Absorption	ASTM D543	0.2%

*CS-17 Taber Abrasion Wheel, 1,000 gram load, 1,000 revolutions Results are based on conditions at 77°F (25°C), 50% relative humidity.

APPROXIMATE COVERAGE:

Coverage will vary depending on the application thickness, floor profile and absorbency of the concrete.

Layer	Coverage
Base / Seed Coat	10 to 20 mils (80 to 160 sq.ft./gal)
Sand Broadcast	0.4 to 0.5 sq.ft. per lbs. (100 sq.ft. per 50 lbs. bag) per broadcast
Grout Coat	12 to 20 mils (80 to 130 sq.ft./gal)
Topcoat (OPTIONAL)	Varies based on desired texture & sheen

AREA PREPARATION: Be sure to mask or cover all areas that are not intended to be coated; including, but not limited to door frames, doors, walls and windows. Use temporary floor protection (*i.e. plastic sheeting, Ram Board®, cardboard or similar*) to cover the mix station floor from spills during installation.

Ram Board® is a registered trademark of Ram Board, Inc.





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NECESSARY TOOLS & EQUIPMENT:

- Painters masking tape or Stucco tape
- 2" wide chip paint brushes
- 4" or 6" wide 3/8" nap trim paint rollers and frames
- Quartz blower or extra 5 gallon paints for seeding Quartz
- Paint or Jiffy mixing paddle
- Low speed 1/2" drill (<450 rpm)
- Gauging tool:
 - 1/16" X 1/16" V-Notch Squeegee for metering 12 to 15 mils
- Flat blade Squeegee for grout coat
- 5 gallon pails for mixing
- Premium, Non-Shed 3/8" Nap Paint Roller Covers
- Paint Roller Frame with Extension Pole
- Spiked shoes or Soccer Cleats
- Cleaning Solvent (Acetone, MEK, Xylene)

LIMITATIONS:

- *Not U.V. Stable* – All epoxy will amber over time. Ambering will be more noticeable with lighter colors. Applying a solid color pigmented U.V. Stable topcoat is highly recommended over Smith's Shop Floor system
 - U.V. Absorber additives will reduce & slow but not eliminate epoxy ambering
- This system is not recommended for use over wooden substrates as it may telegraph crack at the seams between boards
 - Smith's Poly-FLEX may be used as a flexible layer over wood at a minimum thickness of 30 mils prior to application of Smith's Shop Floor system

CHEMICAL RESISTANCE: Refer to the product used as the final wear surface / topcoat for chemical resistance.

INSPECT THE SUBSTRATE: Ensure the concrete is structurally sound and solid as well as free of any contaminants that may act as a bond breaker, such as oil, paint, densifier/sealers, curing compounds, wax, silicone, etc.

SUBSTRATE CONTAMINATION: Concrete is porous and can become contaminated with oils, chemical from spills, etc. which act as a bond breaker. Determine if a potential bond breaker exists and a proper course of remediation.

Core sample Petrographic Analysis is the best method for testing of concrete for contaminate type and depth as well as for documenting and determining if other risks exist prior to proceeding with quoting and application of a flooring system. It is the contractors' responsibility to determine the substrate suitability and the course of action for remediation.

Smith Paints is a product manufacturer, NOT a testing or analysis service but can provide references for testing labs. When in doubt, hire a third party inspector with appropriate certifications and credentials.

Petrographic core analysis is highly recommended if any of the following, including but not limited to, are thought or known to exist:

- [AAR \(Alkali Aggregate Reaction\)](#)
 - [ACR \(Alkali-Carbonate Reaction\)](#)
 - [ASR \(Alkali-Silica Reaction\)](#)
- Hydrostatic Pressure (*Pressurized Fluid / Liquid*)
- Near Surface ASR (*may occur in certain environments which have been topically treated with Sodium Silicates or Potassium Metasilicates*)
- Substrate contamination (*i.e. Oils, Solvents, PERT, PCB's, Silicone, etc.*)

CHEMICAL CONTAMINATION – If chemical contaminants exist, additional testing may be required. Once the type of contaminant is determined, contact Smith Paint Products for recommendations. Petrography of concrete cores may be necessary to determine what chemicals are present as well as the depth of penetration.

OIL CONTAMINATION – [Smith's Oil Clean](#) may be used to remove oils, such as petroleum, synthetic and food oils, from the surface of the concrete prior to mechanical preparation.

- 1) Scrape to remove heavy build-up of oil and grease
- 2) Shotblast to a CSP 3 to remove the surface paste of the concrete as well as paint, adhesives, dirt, debris, etc.
- 3) Wet down a 10 ft. x 10 ft. area with water
- 4) Pour 1/2 gallon of [Smith's Oil Clean](#) on the surface
- 5) Use a low-speed orbital floor machine with a soft bristle brush head to agitate the microbial cleaner across the entire area in multiple passes for approximately 10 to 20 minutes
- 6) DO NOT ALLOW AREA TO DRY - Keep the area wet and reapply water as necessary
- 7) Allow to dwell for a minimum of 30 minutes, longer for heavy contamination
- 8) Use a wet vacuum or an auto scrubber to extract the remaining liquid thoroughly
- 9) Clean water rinse and extract again leaving no puddles nor standing water, including in gouges, chips, cracks or joints
 - a) If oil continues to weep out of the concrete, repeat the process
 - b) Excessive oil contamination may require 2 applications with the second application being soaked with water then covered with at least 3 mil plastic overnight then shotblasted again to remove purged contamination
- 10) While the floor remains damp, apply [Smith's Epoxy MAC125](#) at 10 to 12 mils (332 to 400 sq.ft. per kit)
- 11) Allow to cure a minimum of 5 hours or overnight
- 12) Screen the surface of the primer to remove any contamination that may have floated through the primer before it cured
- 13) Vacuum the dust off the primer then clean with warm potable water and Dawn soap or [Smith's Neutral Detergent](#) (*16 parts potable water to 1 part by volume [Smith's Neutral Detergent](#)*)
- 14) ****DO NOT USE simple green® or Soy based detergents****
- 15) Dry mop the floor then allow to air dry for 60 to 90 minutes or use a floor fan to assist in completely drying the surface
- 16) Tack rag the surface with Acetone on a lightly dampened microfiber mop head or cotton rag replacing the rag frequently. Repeat until surface is clean then allow to dry for 30 minutes

simple green® is registered trademark of Sunshine Maker's Inc.

TEMPERATURE & HUMIDITY: Substrate & material temperature must be maintained for 24 hours before & after application.

	Material	Substrate	Ambient	Humidity
Best	60° to 80°F	60° to 85°F	65° to 85°F	30 to 60%
Minimum	50°F	50°F	50°F	25%
Maximum	90°F	85°F	95°F	80%



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CLEANING: Detergent scrub with [Smith's Neutral Detergent](#), or similar, and rinse with clean, potable water to remove surface dirt, light surface grease/oil and contaminants prior to mechanical preparation. Heavy grease and oil should be removed using [Smith's Oil Clean](#).

If a densifier or dissipating curing compound is believed to have been present, use [Smith's Green Clean Pro](#) biodegradable etching gel after mechanical preparation methods.

SUBSTRATE PREPARATION: Mechanical substrate preparation is the **MOST IMPORTANT** phase of a successful floor coating application. Proper floor preparation results in the product's longevity, minimizes potential failures & creates the best environment for an aesthetically pleasing installation. In short, the more detail & time allotted to this phase of the project will dramatically affect the appearance as well as the durability & longevity of the finished floor.

- 1) Clean the substrate with a detergent scrub using [Smith's Neutral Detergent](#), or similar, and rinse with clean, potable water to remove surface dirt, light surface grease/oil and contaminants prior to mechanical preparation
 - a) Heavy grease & oil should be removed using [Smith's Oil Clean](#)
- 2) Allow new concrete to cure for at least 28 days to obtain ideal design strength of the concrete to allow for proper preparation*
 - a) Coatings applied to a damp or incompletely cured concrete substrate may loss of adhesion or develop undesirable surface irregularities. Moisture Vapor Testing is always recommended when coating directly over concrete
 - b) *See "Moisture/Alkalinity" section for fast-track construction a newly poured concrete slab (Cured 10 to 14 days cure at 72°F)
- 3) Allow new concrete to cure for at least 28 days
 - a) A hazy appearance, blistering or loss of adhesion may occur when applied to damp or incompletely cured concrete. Moisture Vapor Testing is always recommended when coating directly over concrete
 - b) *See "Moisture /Alkalinity" section on page 2 for more details
- 4) Remove paint, adhesives & loose particulates from the intended application surface
- 5) Mechanically prepare to a Concrete Surface Profile - CSP 2 to CSP 4 via mechanical grinding with a 40 grit (or less) metal bond diamonds or shot-blasting
 - a) Properly prepared concrete substrate will be uniformly "white" in color & readily absorb liquids within 60 seconds
 - b) **DO NOT USE MURIATIC/HYDROCHLORIC ACID TO PREPARE CONCRETE AS CHLORIDE CONTAMINATION CAN OCCUR**
 - c) If water is introduced to the intended application area, allow substrate to fully dry
 - d) **DO NOT USE RESIN BOND DIAMONDS FOR GRINDING**
- 6) Key in all termination points by saw cutting 1/8th inch wide by 1/8th inch deep lines at doorways, drain, etc.
- 7) For exterior applications – Remove 1 to 2" wide & deep of grass, mulch, landscaping rocks, etc. against the concrete to be treated to expose the vertical transition & clean
- 8) For a seamless appearance, all joints must be filled with an appropriate semi-rigid joint filler (i.e. [Smith's Poly JF](#)) & finished flush to the concrete surface *See Page 4
- 9) Repair all chips, cracks, gouges, divots, and other floor irregularities with [Smith's PCF-45](#), [Smith's SKM](#) or similar then grind smooth & flush to surrounding surface *See Page 4

MOISTURE & ALKALINITY TESTING – INTERIOR CONCRETE Follow the testing manufacturer's instructions precisely or visit www.astm.org, see ASTM F1869 or F2170, to purchase the test methods. Testing **MUST** occur within an acclimated, interior environment for the results to be valid & conclusive.

The absence of an effective moisture vapor barrier may create an environment for moisture vapor transmission as well as high levels of alkalinity in concrete slabs. Blistering, delamination, flaking, etc. may occur in these environments when a non-breathable coating is applied over the surface of the concrete.

This system can withstand up to 3 lbs. (per ASTM F1869) of Osmotic Moisture Vapor transmission as well as up to 75% Relative Humidity (per ASTM F2170) when applied over existing concrete slabs mechanical profiled to CSP ≥2 via diamond grinding.

Use [Smith's Epoxy MAC100](#) or [Smith's Epoxy MAC125](#) (@23 mils Perms = <0.1 grams / 24 h*m²*mmHg per ASTM E96 / F3010) 2 coat system with a full broadcast of Quartz into the pigmented second coat should osmotic moisture vapor exceed 3 lbs. / 75% Relative Humidity / ≥12 pH.

- 1) Shotblast to a CSP 3 to remove the surface paste of the concrete as well as paint, adhesives, dirt, debris, etc.
- 2) Apply a clear primer coat of [Smith's Epoxy MAC100](#) or [Smith's Epoxy MAC125](#) at 10 to 12 mils

NOTE: Silicate-based products are highly discouraged as a means of moisture remediation as these products may crystallize in the pores of the concrete surface & impede on the adhesion of the coating system.
- 3) Allow primer to cure a minimum of:
 - a) [Smith's Epoxy MAC100](#) = 12 hours @ 72°F / 24 hours @ 60°F
 - b) [Smith's Epoxy MAC125](#) = 3 hours @ 72°F / 4 hours @ 60°F
- 4) Apply a pigmented second coat of Smith's MAC series primer mixed with 1 can of [Smith's ISC Solid Color Packs](#) per kit spread with a notched squeegee at 10 to 12 mils (333 to 400 sq.ft. per kit) then back rolled with a 3/8" nap shed resistant roller cover
 - a) Broadcast Quartz to rejection at a rate of 100 sq.ft. per 50 lbs. bag (0.5 lbs Quartz per sq.ft.)
- 5) Scrape, sweep then thoroughly vacuum entire surface to remove loose Quartz after curing for a minimum of:
 - a) [Smith's Epoxy MAC100](#) = 12 hours @ 72°F / 24 hours @ 60°F
 - b) [Smith's Epoxy MAC125](#) = 3 hours @ 72°F / 4 hours @ 60°F
- 6) Proceed with grout coat steps on page on page 5

Smith Paint Products is strictly a product manufacturer & does NOT offer any testing or analysis but may be able to offer guidance to an appropriate testing lab or third-party inspector. When in doubt, hire a qualified third-party testing firm.

TEMPORARY HEAT – During application in environments using temporary heat, make sure to exhaust emissions and toxic fumes from temporary heaters to the exterior of the building to prevent health hazards and damage to work. Many temporary heating methods emit unburned petroleum into the air which act as a bond breaker once it falls onto the surface of the substrate

- Precautions must be taken when using petroleum fueled temporary heat
- Always shut off temporary heat at least 2 to 3 hours prior to application to reduce risk of airborne petroleum contamination
- Always clean the mechanically prepared surface with [Smith's Oil Clean](#) or TSP using an auto-scrubber followed by a thorough clean water rinse when temporary heat has been in use
- Fisheyes are a result of surface contamination



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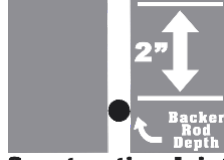
JOINTS: Saw cut all joints open with a Diamond cutting blade and fill with an appropriate semi-rigid joint filler, such as [Smith's Poly JF](#) or [Smith's Poly JF/FC](#). Use a dry fine grade washed sand to prefill joints to



Control Joint

provide a bond break at the bottom and to support the joint filler.

Use a broom to remove any excess sand leaving the recess twice the width of joint.

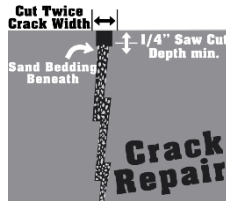


Construction Joint

Epoxy is not as flexible as a moving joint, honoring of the joint at the surface after the resurfacing layer is applied then fill will an appropriate joint filler can lessen joint telegraphing. Please contact Smith's for more recommendations for crack repairs, joint wall rebuilding, etc.

REPAIRING CRACKS, CHIPS & GOUGES: Surface defects may be repaired with a variety of different, compatible coating products, including but not limited to:

- [Smith's SKM](#)
- [Smith's Epoxy GEL150](#)
- [Smith's Epoxy GEL150/FC](#)
- [Smith's Epoxy U100](#) mixed with Fumed Silica
- [Smith's Epoxy FC125](#) mixed with Fumed Silica
- [Smith's Poly PCF-45](#)



Ensure patching products are hard enough to walk on without the risk of damage before proceeding with subsequent sanding & coatings.

Resinous repair methods are preferred. Should a cementitious repair compound be used for repairs, it *must be*:

- non-water soluble; >5,000 psi; rated for exterior use
- Recommended as a direct traffic bearing surface / topping / overlay
- rated for exterior use
- cement product data sheet states "for use under a resinous coating" or similar

Any voids or missing sections of concrete without a layer of existing, cured concrete to adhere to must be pre-filled with either a Type K Concrete or a shrinkage compensated high strength mortar yielding less than 12% moisture content in a few days *allowing for a minimum of 24 hour cure or longer depending on temperatures.*

Traditional full depth concrete repairs, such as plumber trenches, must be allowed to fully cure for at least 1 month or may be primed with Smith's Epoxy MAC series primers at 10 to 12 mils after the concrete has attained no higher than 12% moisture content and is strong enough to accept shotblasting or extensive diamond grinding, typically 10 days at 72°F with a 0.45 slump, 4,000 psi, 4 inch thick concrete slabs on or below grade. Allow 5 to 6 days cure for high early strength concrete or when 12% moisture content is achieved.

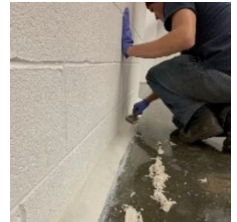
Patching may also occur using [Smith's PCF-45](#) poured over dry sand or [Smith's SKM](#) for fast curing applications to virtually any depth over concrete as well as for crack repairs.

RESINOUS COVE: Prime wall surface with [Smith's Epoxy U100](#) used a paint brush or trim roller. Cove must be applied into fresh, wet primer otherwise the cove mix will slide across the cured primer surface.

3/4 gallon [Smith's Epoxy U100](#) or [Smith's Epoxy GEL150](#) to 37 to 45 lbs. of 40 Mesh Quartz

- Prime wall with [Smith's Epoxy U100](#)
 - Mix 2 Parts A to 1 Part B by volume mechanically mixed with a paint mixing paddle attached to a low-speed drill for 2 to 3 minutes
 - Apply with a brush or 4" wide shed resistant cabinet or 3/8" nap trim paint roller on the wall area to receive seamless Cove
 - Primer must remain fresh / wet while applying cove
 - Do not prime more area than can be covered with cove in 30 minutes at 72°F
- Mix [Smith's Epoxy GEL150](#) (2 Parts A to 1 Part B with 7% by volume of [Smith's ISC Colorant](#)) for 2 minutes
- Slowly begin to add in 12 to 15 Parts 40 Mesh Quartz while continuing to mix for an additional 2 minutes or until thoroughly blended
- Immediately begin troweling the mixture onto the freshly primed wall and trowel finish
- Use a spray bottle with Denatured Alcohol as necessary to lubricate the trowel

2A TO 1B
VOLUME MIX RATIO
12 TO 15 PARTS
VOLUME MIX RATIO



Do NOT mix more material than can be placed, finished & tied into with subsequent batches within a 15 minute period at 75°F substrate temperature.

Yield for 3/4 gallon kit of Epoxy GEL150 cove mix

Cove Type & Size	Single Batch Yield	
	Loose Mix (37 lbs. Quartz)	Stiff Mix (45 lbs. Quartz)
45° Cant Cove – 2"	18.5 lin.ft.	22.5 lin.ft.
45° Cant Cove – 4"	9 lin.ft.	11 lin.ft.
2" Radius Cove (1/8" Cove strip top with 1" radius bottom)	26 lin.ft.	32 lin.ft.
2" Radius Cove (Flush troweled top with 1" radius bottom)	52 lin.ft.	64 lin.ft.
4" Radius Cove (1/8" Cove strip top with 1" radius bottom)	13 lin.ft.	16 lin.ft.
4" Radius Flush Cove (Flush troweled top with 1" radius bottom)	26 lin.ft.	32 lin.ft.
6" Radius Cove (1/8" Cove strip top with 1" radius bottom)	8.5 lin.ft.	20.5 lin.ft.
6" Radius Cove (Flush troweled top with 1" radius bottom)	17 lin.ft.	41 lin.ft.
8" Radius Cove (1/8" Cove strip top with 1" radius bottom)	6.5 lin.ft.	8 lin.ft.
8" Radius Cove (Flush troweled top with 1" radius bottom)	13 lin.ft.	16 lin.ft.



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SHOP FLOOR INSTALLATION:

BASE SEED COAT –

1) BOX COLORANTS – To ensure consist color throughout the project

- Open all cans of [Smith's ISC Colorant](#) to be used
- mix each can thoroughly to redistribute any settled pigment at the bottom of each can
- Combine all cans together in a clean 5 gallon pail
- Using a clean paint mixing paddle attached to a low speed 1/2" drill to mix [Smith's ISC Colorant](#) for 2 to 3 minutes
- Refill each can with the same amount of ISC colorant



2) Mix 1 can of [Smith's ISC Color Packs](#) with desired Epoxy Part A Resin (product options below) for 2 to 3 minutes. Options for epoxy body coat, see individual products label for mixing instructions:

- [Smith's Epoxy U100](#) (1 ISC per 3 gallon kit)
- [Smith's Epoxy FC125](#) (1 ISC per 3 gallon kit)
- [Smith's Epoxy MAC100](#) (1 ISC per 2.5 gallon kit)
- [Smith's Epoxy MAC125](#) (1 ISC per 2.5 gallon kit)



3) In a clean 5 gallon pail, combine Part A and Part B

4) Using a clean paint mixing paddle attached to a low speed 1/2" drill (≤450 rpm) to mix epoxy for 2 to 3 minutes

5) Pour mixture onto the substrate in ribbons

6) Immediately spread using a 1/16" x 1/16" V-Notched Squeegee to meter out the body coat

- Coverage = 107 to 133 sq.ft. per gallon of epoxy

7) Backroll with a 3/8" nap non-shed paint roller on an extension pole

8) While the epoxy is fresh, begin broadcasting Quartz to rejection until no epoxy or damp areas are seen. Typical coverage is 100 sq.ft. per 50 lbs. bag of 40 mesh dry, washed natural Quartz

9) Continue this process until the entire area desired to be coated is finished

10) Allow to dry until the floor can be walked on without dislodging the aggregate from the epoxy then sweep up and thoroughly vacuum off the loose sand reclaiming the excess for later phases/use, if desired

Cure Rate prior to Sweeping/Scraping	55°F	72°F	85°F
Smith's Epoxy U100	10 hours	5 hours	3 hours
Smith's Epoxy FC125	6 hours	3 1/2 hours	2 hours
Smith's Epoxy MAC100	26 to 30 hours	12 to 14 hours	9 to 10 hours
Smith's Epoxy MAC125	5 hours	2 1/2 hours	NOT RECOMMENDED

NOTE: Cooler temperatures will extend the cure rate and higher temperatures will shorten the working time. Please refer to individual product data sheet for more specific product information. Click on product name above for hyperlink to website product specific documents.

GROUT COAT –

1) Use a flat metal blade to scrape loose sand into piles while knocking down any ridges in the sand

2) Sweep up excess Quartz to save for future use

3) Vacuum entire surface thoroughly

- Make sure to go back over the perimeter, corners, tight areas, etc. to remove all loose sand

4) Mix 1 can of [Smith's ISC Color Packs](#) with desired Grout Coat Part A (product options below) for 2 to 3 minutes. Options for grout coat, see individual products label for mixing instructions:

- [Smith's Epoxy U100](#) (1 ISC per 3 gallon kit)
- [Smith's Epoxy FC125](#) (1 ISC per 3 gallon kit)
- [Smith's Epoxy UCE200](#) (1 ISC per 3 gallon kit)
- [Smith's Epoxy GEL150](#) (1 ISC per 3 gallon kit)

i) OPTIONAL - Sold Separately

– [Smith's Epoxy U.V. Absorber additive](#) for all above epoxy products

- [Smith's Polyaspartic 1000](#) (2 ISC per 2 gallon kit)

- [Smith's Polyaspartic 2000](#) (2 ISC per 2 gallon kit)

- [Smith's Polyaspartic 5000](#) (2 ISC per 1.5 gallon kit)

5) In a clean 5 gallon pail, combine Part A and Part B

6) Using a clean paint mixing paddle attached to a low speed 1/2" drill (≤450 rpm) mix grout coat 2 to 3 minutes

7) Pour mixture onto the substrate in ribbons

8) Immediately spread using a flat blade squeegee at a rate of 80 to 160 sq.ft. per gallon

- Texture is determined by the amount of grout coat applied (i.e. less grout coat = more aggressive surface texture & traction)

9) Backroll with a 3/8" nap non-shed paint roller attached to an extension pole

Cure time prior to Topcoat	55°F	72°F	85°F
Smith's Epoxy U100	10 hours	5 hours	3 hours
Smith's Epoxy FC125	6 hours	3 1/2 hours	2 hours
Smith's Epoxy UCE200	NOT RECOMMENDED	12 hours	8 hours
Smith's Epoxy GEL150	10 hours	5 hours	3 hours
Smith's Polyaspartic 1000	5 hours	2 1/2 hours	90 minutes
Smith's Polyaspartic 2000	8 to 10 hours	4 1/2 hours	3 1/2 hours
Smith's Polyaspartic 5000	10 hours	6 hours	5 hours

NOTE:

- Ambering / Yellowing is to be expected with epoxy-based products and will occur faster when exposed to Ultra Violet light, either from the sun or from interior light bulbs. U.V. Absorber additives, including [Smith's Epoxy U.V. Absorber additive](#), only slow this process. If ambering / yellowing is a concern, please use one of the above [Polyaspartics](#) for the grout coat or apply a solid color aliphatic topcoat (See next section for topcoat options) over the grout coat of choice.

- Cooler temperatures will extend the cure rate and higher temperatures will shorten the working time. Thicker application of [Polyaspartic products](#) will take longer to become hard enough to recoat and/or scuff. Please refer to individual product data sheet for more specific product information.

- Click on product name above for hyperlink to website product specific documents.



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TOPCOATS (OPTIONAL) – Allow the grout coat to cure before walking on, sanding or applying any optional topcoats. Please see the individual product data sheet for detailed application instructions.

- 1) Sanding prior will help even out the surface texture and is required for high gloss topcoats or if the recoat window has exceeded 24 hours. Topcoats may be applied directly to Grout Coats within the recoat window
 - a) Abrade the grout coat to uniformly dull using 80 grit sandpaper or sanding screens under a white or green pad using an orbital Low Speed Swing Buffer
 - Using more aggressive grit screens or sandpaper may create burns, scars, scratches, swirls & grooves in the finish that topcoats may not fully fill in and hide
 - a good rule of thumb is to wait overnight to avoid damaging the fresh grout with temperatures above 75°F
 - b) Use an orbital palm sander for edges and hard to reach areas
 - c) Surface should be uniformly dull with no deep scratches easily identified
- 2) Clean to remove all dust
 - a) Vacuum entire surface thoroughly
 - b) Solvent wipe with a lightly dampened microfiber mop until no dust transfers to a fresh microfiber pad
- 3) Mask off transitions, wall edges, drains, etc. with a premium solvent resistant masking tape
- 4) Select a topcoat appropriate for the traffic, chemical exposure and environment. Apply the topcoat at the appropriate rate stated below via dip & roll method
 - Smith's CRU[®]86 High Solids Aliphatic Chemical Resistant Polyurethane
 - Gloss ≈ 400 sq.ft. per gallon
 - Low Sheen with Smith's A/O 325 ≈ 500 to 600 sq.ft. per mixed gallon
 - Smith's Hi-Wear 90S High Traffic Chemical Resistant Polyurethane
 - Low Sheen ≈ 535 to 650 sq.ft. per mixed gallon
 - Smith's MCU-60 Solvent-based Aliphatic Moisture Cured Polyurethane
 - Gloss ≈ 400 sq.ft. per gallon
 - Low Sheen with Smith's A/O 325 ≈ 500 to 550 sq.ft. per mixed gallon
 - Smith's Poly-WB Water-based Polyester Polyurethane
 - Semi-Gloss ≈ 200 to 300 sq.ft. per mixed gallon
 - Low Sheen ≈ 500 to 550 sq.ft. per mixed gallon
 - Smith's Polyaspartic 1000 Fast Cure, 76% Solids Polyaspartic
 - Gloss, Slight Orange Peel Texture ≈ 200 to 325 sq.ft. per mixed gallon

* Angular traction additive, such as Smith's Resin Sand, is highly recommended in areas exposed to grease / oil / soap / water / or less than 60°F service temperatures

 - 5) Mix the topcoat with the appropriate amount of colorant
 - 6) Pour mixed topcoat into a paint tray
 - 7) Dip and roll apply then cross roll at appropriate spread rate
 - a) See individual product data sheet for detailed topcoating instructions

CURE RATE FOR TRAFFIC:

72°F (22.2°C) with 50% Ambient Humidity	Light Foot Traffic	Fork Lift Traffic	Full Chemical Exposure
<u>Smith's CRU[®]86</u>	24 hours	48 to 72 hours	7 days
<u>Smith's Hi-Wear 90S</u>	12 hours	24 hours	7 days
<u>Smith's MCU-60</u>	12 hours	24 hours	7 days
<u>Smith's Poly-WB</u>	16 to 18 hours	48 hours	7 days
<u>Smith's Polyaspartic 1000</u>	4 hours (@ 8 mils)	24 hours (@ 8 mils)	≤3 days (@ 8 mils)

NOTE: Polyaspartic products cure rate will extend when applied greater than 8 mils. Please refer to individual product data sheet for more specific product information. Click on product name above for hyperlink to website product specific documents.

SLIP RESISTANCE: Smith Paint Products recommends the use of angular slip-resistant aggregate in all coatings that may be exposed to wet, oily or greasy conditions as well as any condition where increased traction may be necessary. It is the contractor & end users' responsibility to determine the appropriate traction needs & footwear necessary for the conditions as well as setting performance parameters prior to beginning the application, testing to determine parameters have been met upon completion to achieve the end users documented safety standards.

Mock-ups are highly recommended as part of the evaluation process to determine the appropriate amount of slip-coefficient necessary for the environment.

Smith's A/O 325 Mesh Aluminum Oxide is too fine to be considered "Non-skid" when used in a topcoat. Instead use Smith's Resin Sand or similar 20 to 60 mesh when using a traction additive.

MAINTENANCE: The coating system must be allowed to cure for no less than one week before using any mechanical cleaning equipment on the surface and no less than 24 hours before neutral cleaner or water exposure. This includes auto-scrubbers, swing buffers, sweepers, etc. Only dust and wet mopping may occur the first week. [Please click here for more in-depth maintenance procedures.](#)

Dust mopping, removal of debris & regular cleaning is crucial to maintaining the aesthetics of the coating & obtaining the maximum life span of the floor coating system. Cleaning cannot occur too often & inefficient cleaning will cause the floor to wear out prematurely, possibly stain or discolor depending on what comes in contact with the floor. Spills should be removed quickly. Avoid the use of Polypropylene or abrasive bristle (Tynex[®]) brushes as these brushes will cause the development of scratch patterns & lessen the sheen.

To maximum your investment with proper floor care & maintenance, remove all particles that may scratch and/or dull the floor coating using the least aggressive method necessary to clean the floor.

It is good practice to develop a floor maintenance schedule to be performed at the end of each shift & a set day per week or month for heavy cleaning:

- Daily = Sweep & dust mop or water only mopping/auto-scrubbing; spot clean spills & oils
- Weekly or Monthly = Scrubbed once per week or month depending on the amount & type of soils present

Health Department or DEA regulations may necessitate more frequent & stringent cleaning practices as will areas prone to oils, inks, chemicals, etc. on the floor surface.

- Do not drag or drop heavy objects across any floor, including coatings as scratching, gouging or chipping may occur to the concrete or the coating itself. This includes the tip of the forks on a forklift, nails protruding from a pallet, etc.
- Avoid spinning tires on the surface of a coated floor. The heat created from the friction of a spinning tire will quickly soften the coating causing permanent damage to the finish
- Should a gouge, chip or scratch occur, touch-up the damaged areas immediately to avoid chemical or water intrusion to the concrete which could create additional damage. A thin layer of clear nail polish to the damaged area will provide some minimal protection until the area can be properly repaired
- Rubber tires are prone to plasticizer migration, especially aviation tires & high-performance car tires. Plasticizer will stain coatings & commercial flooring leaving an amber, yellow-like stain that can be permanent. Some tire stains can be removed is cleaned before a set-in stain occurs using a d-Limonene based degreaser & some mild agitation using an orbital, low speed floor machine

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