Smith's Product Data Sheet

Epoxy VCB46P Solid Color, Low Odor, Fast-Curing Waterborne Epoxy Base Coat for Vinyl Chip Broadcast

VCB46P-PDS-07232024

DESCRIPTION: Smith's Epoxy VCB^{46P} is a 2-component, low odor, low VOC, fast-curing waterborne solid color epoxy developed as a base coat for full broadcast Vinyl Chip systems in residential, retail and light commercial environments.

Smith's Epoxy VCB^{46P} achieves a tenacious bond at all recommended application temperatures and cures quickly, allowing for the excess, loose chips to be removed in a few hours with subsequent layers immediately following.

May also be used as a solid color vertical base coat on concrete or CMU walls as well as an alkalinity and moisture vapor reduction primer with readings <5% MC (per ASTM F2659), <15 lbs. (per ASTM F1869) or <95% RH (per ASTM F2170) with 9 to 12 pH when applied at 10 to 12 mils (WFT) over properly mechanically prepared concrete *(See page 2 for details & limitations)*.

RECOMMENDED USES:

- As a Base Coat for Full Broadcast Vinyl Chip over properly prepared, sound & solid:
  - o Concrete & Lightweight Concrete
  - o Wood (APA Exterior or Marine grade after priming with Smith's Epoxy FW38)
  - o Appropriate for Light Commercial & Residential Interior Full Broadcast Vinyl Chip floors
- Primer as part of a residential, retail or commercial coating system to include moisture vapor transmission and alkalinity reduction *(See page 2 for details & limitations)*

HIGHLIGHTS:

- Solid Color – 4 Colors Available
- Alkalinity Resistant
- Moisture Tolerant with Low Permeability
  - o Passed ASTM E96-23 Method B third party testing
- Easy to Apply
- Fast Cure – remove loose Vinyl Chip within a few hours
  - o May be used as part of One Day installation system
- Low Odor & VOC's – Available in all regions

STORAGE:

Indoors between 50°F (10°C) to 95°F (35°C)

DO NOT FREEZE

Keep Cool

SUBSTRATE SURFACE TEMPERATURE:

55°F (12.8°C) to 95°F (35°C) between 10% to 80% humidity

**Do NOT Apply if the temperature is expected to drop below 55°F (12.8°C) within the first 10 hours after application*

SHELF LIFE:

- 1 Year in original, unopened containers
- Opened containers may be used within 30 days

AVAILABLE KIT SIZES & COLOR:

SCS-VCB46P-5500-160	White 5500	1.25 gallon kit
SCS-VCB46P-5510-160	Boulder 5510	1.25 gallon kit
SCS-VCB46P-6515-160	Grayhawk 6515	1.25 gallon kit
SCS-VCB46P-5585-160	Medium Gray 5585	1.25 gallon kit

CURE TIMES (@ 50% Relative Humidity):

NOTE: *Higher Humidity and/or Lower Temperatures will extend rate of cure*

	60°F	72°F	85°F
Pot-Life	35 min.	30 min.	18 min.
Working Time	30 min.	25 min.	20 min.
Tack-Free	3 hrs.	90 min.	70 min.
Recoat - Remove Loose Vinyl Chip	3 to 3½ hrs. up to 24 hrs.	2 to 2½ hrs. up to 24 hrs.	90 min. up to 24 hrs.
Full Traffic *(i.e. parked vehicles, etc.)*	60 hrs.	36 hrs.	24 hrs.
Full Cure	10 days	7 days	6 days

If optional primer exceeds 24 hours, sanding to thoroughly degloss surface prior to base coat is required. Thicker application as well as cooler temperature will extend cure rate

CURED COATING PROPERTIES (DRY FILM):

Property	Test Method	Results
VOC's – Volatile Organic Compounds	ASTM D3960	4 g/L (Pre-tinted kits)
Viscosity – Mixed	ASTM D2196	300 to 400 cP
Solids Content		46% Solids
Adhesion to Concrete	ASTM D4541	Concrete Fails
Hydrostatic Pressure at 10 psi - Tested full broadcast vinyl chip system	ASTM D7088	PASS - No Blistering or Leaks
Permanence*	ASTM E96-23	PASS = <0.1 Result 0.053 (ave.) / 24h*m²* mmHg

**Independently tested as a complete system for 3,500 hours over concrete. Passed using the below system components as described, which met ASTM E96 requirements of less than 1 gram per 24 hours. Tested system consisted of 1 coat Smith's VCB46P Boulder 5510 applied at 10 mils WFT average thickness with a full broadcast to rejection of 1/4" Vinyl Chip blend VC-140 Autumn followed by seal coat of Smith's Poly-SEAL then a grout coat of with Smith's Polyaspartic 5000LO at 10 mils WFT or Smith's Poly-WB at 8 mils WFT*

APPROXIMATE COVERAGE:

Coverage varies due to application thickness, floor profile and absorbency of concrete.

*Coverage Equation: 1604 ÷ milage = Wet Film Thickness * 0.46 = Dry Film Thickness*

Mil Thickness Wet (DRY)	Coverage per mixed gallon
7 mils WFT (3.22 mils DFT)	229 sq.ft./gal *(286 sq.ft. per 1.25 gal. kit)*
8 mils WFT (3.68 mils DFT)	200 sq.ft./gal *(250 sq.ft. per 1.25 gal. kit)*
9 mils WFT (4.14 mils DFT)	178 sq.ft./gal *(222 sq.ft. per 1.25 gal. kit)*
10 mils WFT (4.6 mils DFT)	160 sq.ft./gal *(200 sq.ft. per 1.25 gal. kit)*
12 mils WFT (5.52 mils DFT)	133 sq.ft./gal *(167 sq.ft. per 1.25 gal. kit)*
15 mils WFT (6.9 mils DFT)	107 sq.ft./gal *(133 sq.ft. per 1.25 gal. kit)*
20 mils WFT (9.2 mils DFT)	80 sq.ft./gal *(100 sq.ft. per 1.25 gal. kit)*

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NECESSARY TOOLS and EQUIPMENT:

- Plastic Sheeting or Ram Board to cover floor for mix station
- Paint spiral blade mixing paddle
- Low speed ½" drill (Variable Speed 450 to 600 rpm)
- V-Notch Squeegee *(example squeegee blades below utilizing a Midwest Rake EasySqueegee 18" Frame attached to a threaded extension pole)*
  - o 8 to 12 mil squeegee for Vinyl Chip Base
  - o 15 to 20 mil squeegee for MVT priming
- Premium, Non-Shed, Solvent Resistant 3/8" Nap Paint Roller Covers (i.e. Foam, Mohair, Microfiber, etc.)
- 2" Wide Premium Masking Tape or Stucco Vinyl Tape
- 2" to 4" Wide Chip Paint Brushes for cutting in edges
- 2" to 6" Wide 3/8" nap trim roller & frame for cutting in tight areas
- Flat blade window squeegee for seal coat & topcoat
- Paint Roller Frame with Extension Pole
- Spiked shoes or Soccer Cleats
- Cloth Rags

LIMITATIONS:

- Minimum of an ICRI CSP 2 to 3 mechanical substrate preparation profile *(See page 3)*
- Wood substrates, including new, require sanding or grinding surface preparation. Do NOT Apply over rotten or water damaged wood substrates
- *NOT U.V Stable* - Will discolor with U.V. exposure
- Do NOT Apply in direct sunlight or on a hot substrate as flash curing will yield poor adhesion & possibly bubbles in the finish
- Fisheyes are a result of surface contamination
- Maximum thickness is:
  - o Base for Vinyl Chip broadcast = 12 mils *(Wet Film Thickness / 133 sq.ft. per gallon)*
  - o Vertical / Wall Coatings = 5 mils *(WFT / 321 sq.ft. per gallon)*
  - o Primer prior to residential / light commercial traffic floor coating system = 20 mils *(WFT / 80 sq.ft. per gallon over CSP 2 to 4 depending on application & conditions)*

INSPECT THE SUBSTRATE: Ensure the substrate is structurally sound & 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.

TEMPERATURE and HUMIDITY: Substrate temperature and materials must be maintained between 55°F (12.8°C) to 95°F (35°C) with 10% to 80% Ambient Humidity for 24 hours prior to or 24 hours after installation.

- Do NOT Install coatings when the Dew point is within 5° of the temperature
- Do NOT Apply if the temperature is expected to drop below 55°F (12.8°C) within the first 10 hours after application to minimize risk of Amine Blush

TEMPORARY HEAT: Moisture vapor is emitted by fueled temporary heaters which creates condensation to occur on the floor surface & can cause an amine blush with epoxy products. Many temporary heating methods also can 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 LP, gasoline, diesel, etc. fueled temporary heat
- Always shut off temporary heat at least 2 to 3 hours prior to application to reduce risk of an amine blush
  - ▪ Fisheyes are a result of surface contamination or an amine blush
- Ensure exhaust emissions & toxic fumes from temporary heaters exhaust to the exterior of the building to prevent health hazards & damage to work
- Always clean the mechanically prepared surface with *Smith's Oil Clean* using an auto-scrubber followed by a thorough clean water rinse when temporary heat has been in use

CHECK FOR MOISTURE: Testing concrete moisture & pH is highly recommended using a combination of all three methods below. Readings below are acceptable when tested in accordance with the stated ASTM standard:

Acceptable Readings:

- Comparative Gravimetric Moisture Content meter (ASTM F2659) ≤5% MC
- Calcium Chloride testing (ASTM F1869) *<15 pounds per 1,000 sq.ft./24 hours with between 9 to 12 pH*
- Relative Humidity (ASTM F2170) *<90% RH*

MOISTURE TESTING **–** Follow test equipment manufacturer's instructions precisely or visit www.astm.org to purchase the test methods. Testing MUST occur within interior environment which has been properly acclimated using the HVAC system to the temperatures & ambient humidity the room is intended to be when occupied for no less than 48 hours prior to beginning testing for the results to be valid / conclusive. Absence of an effective moisture vapor barrier beneath an on or below grade concrete slab may create an environment for moisture vapor transmission as well as high levels of alkalinity in concrete slabs *(generally, but not limited to interiors)*.

For newly poured >3,500 psi compressive design strength concrete with a 0.45 water to cement ratio at 4" thick, allow the concrete to cure until all bleed water has evaporated & the surface is hard enough to properly mechanically prepare without significantly damaging the surface of the slab, typically 1 month under normal conditions at an average temperature of 72°F (22.2°C) excluding any days of rain / water exposure. Cooler cure temperatures, thicker slab depths & water exposure will extend the necessary cure time of concrete. Concrete is strong enough to mechanically prepare once testing determines a hardness of ≥3 using a Mohs surface hardness scratch test & ≤5% MC (per ASTM F2659) using a Comparative Gravimetric Moisture Content Meter.

Should moisture vapor emissions exceed the above thresholds, *Smith's Epoxy MAC100* or *Smith's Epoxy MAC125* may be necessary to suppress the moisture vapor emission rate to a level within the tolerance of subsequent coating system.

Please note that Silicate-based "moisture vapor remediation" products cannot be proven to lower the vapor permeability nor can testing determine whether an acceptable permeability has been achieved after treatment. Therefore, silicate based products are NOT recommended for use prior to Smith's Epoxy VCB.

Smith Paint Products is strictly a product manufacturer and 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. Smith Paint Products is not responsible for failures due to the presence of moisture vapor emissions and/or high levels of alkalinity, ionic salts, etc.

CONTAMINATION OF SUBSTRATE: Porous substrates contaminated with oils, chemical from spills, etc. which act as a bond breaker. Determine if a potential bond breaker exists & a proper course of remediation. Core sample Petrographic Analysis is the best method for testing of concrete for contaminate type & depth as well as for documenting and determining if other risks exist prior to proceeding with quoting & application of a flooring system. It is the contractors' responsibility to determine the substrate suitability & the course of action for remediation.

Delamination and/or breakdown due to the following causes are examples of substrate contamination:

- AAR (Alkaline Aggregate Reaction)
  - o ACR (Alkali-Carbonate Reaction)
  - o ASR (Alkali-Silica Reaction)
- 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.)

OIL CONTAMINATION – Smith's Oil Clean may be used to remove oils, such as petroleum, synthetic or food oils, from the surface of the concrete prior to mechanical preparation. If an oil stop primer is necessary, use Smith's Epoxy MAC125 at 10 to 12 mils neat over a minimum CSP 4 to 5, allow to hard set then apply a second coat of Smith's Epoxy MAC125 at 8 to 12 mils with a full broadcast of dry, washed Quartz sand then allow to dry 1 to 2 hours, sweep & vacuum any loose sand from primer then proceed with installation of desired coating system.

Wood substrates contaminated with oil require removal & replacement of the oil contaminated area with new wood to ensure proper adhesion.

***CHEMICAL CONTAMINATION* –** Chemical contamination should be determined which may require additional testing. Once the type of contaminant is determined, contact Smith Paint Products for recommendations while following local regulations regarding contaminant & disposal.

***SILICATE CONTAMINATION* –** Substrates which may have been previously treated with silicates (Potassium or Sodium Silicates) such as polished or burnished concrete as well as certain surface hardeners such as Ashford Formula® or similar may skew moisture testing results.

Potential silicate contamination may be indicated during traditional moisture testing with abnormally high pH (above 11.5 to 14 pH) with relatively low CaCl reading (less than 6 lbs. reading) & RH readings above 85%. Should further testing be necessary, concrete cores samples & Petrographic Analysis may offer the most in-depth analysis of the situation.

Concrete contaminated with silicate densifiers / hardeners of these types must be mechanically prepared followed by cleaning Smith's Green Clean Pro 24 hours prior to moisture vapor & pH testing in order to obtain accurate readings, otherwise, all testing & subsequent moisture vapor emission warranties are null & void.

NOTE:

- *DO NOT USE* MURIATIC/HYDROCLORIC ACID TO PREPARE CONCRETE AS CHLORIDE CONTAMINATION MAY OCCUR
- When etching, ensure all Smith's Green Clean Pro has been thoroughly removed with potable water with no remaining soapy residue or cement slurry
- *DO NOT USE* Smith's Green Clean Pro on *"Green"* concrete *(less than 30 days old), Hard Trowel Finished* concrete or *previously sealed / coated / painted concrete* to including any type of curing compound

Ashford Formula® is a registered trademark of Curecrete Chemical Company

JOINTS & SUBSTRATE REPAIRS: Honor expansion joints at the finish floor elevation. Follow ACI 224.3R-95: Joints in Concrete Construction guidelines for proper filling of construction & control joints.

ACI recommends allowing a concrete slab to cure for a minimum of 60 to 90 days or longer to allowing the slab to shrink & acclimate to the intended joint width thus reducing the risk of joint wall separation from the joint filler.

Cooler climate applications must be remain at a minimum of 45°F substrate temperature for no less than 10 days prior to as well as 7 to 10 days after filling with an appropriate semi-rigid joint filler, such as Smith's Poly JF or Smith's Poly JF/FC, ideally longer if possible. Static joints may allow the coating system to bridge over Smith's Poly JF but it is NOT recommended to install a floor coating system over caulking, silicone, cement patching compounds, Polyurea & traditional Polyurethane flexible joint fillers.

Always route out joints with an appropriate width diamond cutting blade attached to a vacuumized & dust controlled joint saw to flush out debris & freshly clean the side walls of the joint. Ensure that all loose edges & broken pieces of the concrete are removed & repaired prior to joint filling. Should joint walls require extensive repairs, cut out the weak concrete back to a sound, solid area then infill with Smith's SKM, Smith's Epoxy FRM or similar.

Control Joint

Construction Joint

Support the joint filler & assist in sag reduction by filling the bottom of the joint with a bond breaker, such as sand, especially for use in shallow joints less than 2" depth. *Use backer rod only if the joint filler is to be applied greater than 2" above the backer rod.* Fill the joint with Smith's Poly JF or Smith's Poly JF/FC twice as deep as the joint width.

***Substrate Repairs* –** Patching of chips, gouges, etc. may be repaired with a variety of different, compatible coating materials, to include, Smith's SKM, Smith's Poly PCF-45, Smith's Epoxy FRM, Smith's Epoxy GEL-150, Smith's Epoxy U100 or Smith's Epoxy FC125 mixed with Silica Fume or similar. Saw cut cracks open with a diamond cutting blade attached to an angle grinder to clean the void as well as remove the weak wall of the crack on both sides then thoroughly vacuum prior to repairs. Small, isolated uneven, low gouges can be prepared using a needle scaler. Ensure resinous patching products are hard enough to walk on without imprinting or damage before proceeding.

Should the repairs utilize water-based cement compounds, ensure moisture content is acceptable then mechanically prepared prior to application of a floor coating. Cementitious compounds require additional cure times prior to coating with a high solids resinous coating to ensure proper adhesion & long term performance:

- Fully cured - Test per ASTM F2659 with ≤4% MC or a mat test for no less than 4 hours per ASTM D4263. Must mechanically prepare even the surface of the newly repaired concrete patch prior to coating application
  - Portland Cement based = 2 to 3 days for each ¼" average of thickness
  - Calcium Alumina-based = 24 hours for each ¼" average of thickness
- Rated for exterior usage plus direct wear traffic
- Cement-based - Calcium Alumina, CSA or Portland cement based only
  - NOT RECOMMENDED FOR USE OVER UNDERLAYMENT GRADE PATCH / LEVELERS to include *polymer modified synthetic gypsum-based products*
- Non-water soluble
- Minimum 5,000 psi. once fully cured

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SUBSTRATE PREPARATION: Achieve a CSP 2 to 3 *(Concrete Surface Profile in accordance with ICRI Guideline 310.2R2013, as published by the International Concrete Repair Institute)* yielding a surface texture similar to 80 grit sand paper or more course in order to maintain long term adhesion to the substrate.

NOTE: Should verification of proper adhesion be desired or when applying Smith's Epoxy VCB*46P* *over an existing coating, follow ASTM D4541 using an Elcometer to determine a direct tensile pull-off strength greater than 250 psi (1.7 MPa) to pass the test. It is highly recommended that a 10 foot by 10 foot test area be applied of the entire desired coating system and allowed to cure for no less than 1 month prior to performing an in-situ direct tensile bond test to determine adhesion strength values.*

Recommended preparation methods below:

- ***Steel Shot Blast (****Shot size S-230 to S-330 grit recommended****) –*** *Ideal preparation method for weak concrete surfaces.* Uniformly profile & clean concrete substrates overlapping each pass ≥1/2" until white, clean concrete exists. Use magnetic broom to remove excess shot, sweep to remove large debris & vacuum to remove fine dust. Avoid stationary blasting as micro-cracking the concrete surface may potentially cause future coating delamination. Use a vacuumized edge grinder with a diamond cup wheel to prepare hard to reach areas & against transitions
- ***Diamond Grind*** **–** Use 16 to 70 grit metal bond diamonds with an appropriate industrial, weighted head planetary floor grinder to thoroughly profile & remove the substrates surface until uniformly dull & readily absorbs water. Sweep to remove large debris then vacuum to remove fine dust
- ***Scarify*** **–** *Ideal preparation method for weak concrete surfaces, previously coated floors, or adhesive residues.* Sweep to remove large debris & vacuum to remove fine dust. Scarify to uniformly remove the concrete surface until white. Thoroughly vacuum all dust / debris
- ****Silicate Contaminate Removal*** **–** Smith's Green Clean Pro buffered etching compound may be used ONLY as follows:
  - o Remediation method for removing densifiers/silicates *after* one of the above-mentioned mechanical preparation methods

Key in all termination points using a diamond cutting blade prior to any above preparation method.

Sanding & Priming Wooden Substrates **–** Wood substrates must yield the correct deflection criteria of L / 360 per ASTM C 627 *(i.e. Deflection from 300 lbs. concentrated load standard test method).*

Sand wooden substrates using an appropriate wood floor sander to clean as well as remove existing sealers, paints, wax, etc. until the wood surface is thoroughly clean and absorbent. Vacuum the entire surface, paying close attention to voids, knots and seams between boards to remove all sanding dust and debris. Skim coat the joint seams as well as any holes using Smith's Epoxy GEL-150 *or* Smith's SKM to seal off voids that could potentially leak. Once cured, sand all patching relatively flush to the surrounding surface, vacuum the entire floor thoroughly then wipe the substrate with a clean microfiber mop to loosen any remaining dust prior to priming with Smith's Epoxy FW38. Allow primer to cure until firm enough to walk on without damaging the surface of the primer. Should the primer cure beyond 24 hours, thoroughly scuff to degloss the surface "white" then clean prior to coating system application.

**DO NOT INSTALL over oil contaminated, dry-rotten, insect damaged or unsound substrates.*

PRIMING HIGHLY ABSORBANT SUBSTRATES: After mechanically preparing the substrate, pour some water on the surface approximately 4" in diameter then wait 30 to 60 seconds to ensure the surface darkens uniformly and the water has begun to soak in but does not completely absorb into the surface.

If the surface does not darken, preparation is not sufficient and needs to be mechanically prepared more thoroughly or the concrete may be contaminated *(see Page 2 for details)*.

If the water soaks with very little puddling on the surface and the surface has darkened uniformly, priming with Smith's Epoxy FW38 is recommended. Once Smith's Epoxy FW38 primer has become tack free, application of Smith's Epoxy VCB*46P* may proceed.

MIXING: Using a ½" drill (450 to 600 rpm) with a paint mixing paddle attached, premix Part B for 2 minutes to redistribute the settled material at the box of the pail then pour in the Part A while continuing to mix for an additional 3 minutes.

DO NOT MIX MORE MATERIAL THAN CAN BE PLACED, FINISHED THEN TIED INTO WITH THE NEXT BATCH WITHIN 15 MINUTES AT 72°F*. Higher temperatures reduce this time frame.*

APPLICATION: Once mixed, pour out Smith's Epoxy VCB*46P* in a straight ribbon / bead onto the area to be coated then spread with a 8 mil V-notched squeegee followed by a back roll with a 3/8" nap paint roller to evenly distribute the epoxy area or dip and roll with a 3/8" nap paint roller attached to an extension pole at 200 sq.ft. per mixed gallon *(approximately 250 sq.ft. per 1.25 gallon kit)*.

Walk in the freshly placed epoxy wearing spiked cleats to full broadcast Vinyl Chip to rejection within 40 minutes at 72°F. Allow to hard set then sweep off the loose, excess Vinyl Chip, scrap as necessary then thoroughly vacuum the entire surface.

Once the excess flake has been removed and vacuumed clean, apply either the seal coat followed by a topcoat *(see next section)* or a grout coat of a Smith's Polyaspartic product at 8 to 15 mils.

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INSTALLATION (Low Odor Water-based System):
Cure times based on 72°F / 50% RH

1) ***PRIMER*** (OPTIONAL but best practice) – Apply *Smith's Epoxy FW38* with *Smith's WSC Color Pack* at 5 to 7 mils ≈ 229 to 321 sq.ft. per gallon using either the dip & roll method with a 3/8" non-shed solvent resistant roller or a *Flat Squeegee* then back roll with 3/8" non-shed solvent resistant roller. Allow to dry until clear & hard set, typically 2 to 3 hours *(dependent on temperature, air circulation & humidity)*
   a) Should primer cure exceed 24 hours, sand thoroughly to degloss surface prior to base coat
2) ***BASE BROADCAST COAT*** – Apply Smith's Epoxy VCB^{46P} at 8 ≈ 200 sq.ft. per gallon using a *V-Notched 8 to 12 mil Squeegee* then back roll with 3/8" non-shed solvent resistant roller
   a) Immediately broadcast Smith's Vinyl Chip into the fresh 100% solids epoxy at a rate of 0.2 lbs. per sq.ft. (333 sq.ft. per 40 lbs. box)
   b) Allow to cure until hard set, typically 2 to 2½ hours @ 72°F (22.2°C)
3) ***REMOVE & RECLAIM LOOSE CHIP*** – Broom sweep with an exploded tip, soft bristle nylon push broom to remove the excess, loose Vinyl Chip and reclaim for repairs or future projects then scrape using a flat blade scraping tool *(as necessary)* then thoroughly vacuum entire surface to remove any remaining loose chip.
   a) Should any bare areas occur requiring touch-ups, apply *Smith's Poly-SEAL* with a paint brush or trim roller and sprinkle Vinyl Chip into the wet liquid then allow to dry for 30 to 60 minutes
4) ***SEAL COAT*** – Apply *Smith's Poly-SEAL* at 5 to 7 mils ≈ 229 to 321 sq.ft. per gallon using either the dip & roll method with a 3/8" non-shed solvent resistant roller or a *Flat Squeegee* then back roll with 3/8" non-shed solvent resistant roller
   a) Allow to dry until clear & tack-free, typically 45 minutes to 3 hours or overnight *(dependent on temperature, air circulation and humidity)*
5) ***TOP COAT*** – Apply *Smith's Poly-WB* at 5 to 8 mils ≈ 200 to 321 sq.ft. per gallon using either the dip & roll method with a 3/8" non-shed solvent resistant roller or a *Flat Squeegee* then back roll with 3/8" non-shed solvent resistant roller
6) ***FULL TRAFFIC / PARKED VEHICLES*** – Allow a minimum of 48 hour cure at room temperatures prior to placing any cardboard, rubber or plastic items on the surface, to include vehicle tires, walk off mats, etc.
   (Dependent on temperature, air circulation and humidity. Cooler temperatures will extend the cure rate necessary for traffic exposure)

   * Angular traction additive, such as *Smith's Resin Sand*, may be added to this layer if desired.

Cure Time @ 72°F prior to	Full Traffic:	Foot Traffic:
▪ *Smith's Poly WB/G Gloss*	≥48 hours	24 hours
▪ *Smith's Polyaspartic 2000*	≥36 hours	8 hours
▪ *Smith's Polyaspartic 1000*	≥24 hours	4 hours
▪ *Smith's Polyaspartic 5000LO*	≥24 hours	20 hours

** Mil and sq. ft. coverage are theoretical. Substrate porosity will affect coverage rates.*

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 and end users' responsibility to determine the appropriate traction needs and 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.

Do NOT Use Smith's A/O 325 Mesh Aluminum Oxide for additional traction in a topcoat as it is too fine to be considered "Anti-skid". Instead use Smith's Resin Sand or similar 20 to 40 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 & no less than 48 hours before neutral cleaner or water exposure. This includes auto-scrubbers, swing buffers, sweepers, etc. Only dust & wet mopping may occur the first week.***

Dust mopping, removal of debris & regular cleaning is crucial to maintaining the aesthetics of the coating & maximizing the 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 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

Areas exposed to oils, inks, chemicals, etc. on the floor surface necessitate more frequent & stringent cleaning practices.

DETERGENT: Always use the least aggressive detergent necessary to remove the residue. *Smith's Neutral Detergent*, or similar, may be used for general purpose cleaning. Use *Smith's Oil Clean*, or similar degreaser, for more degreasing & heavy duty weekly or monthly cleaning.

***Caution*:** *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 a coated floor surface as the heat created from the friction of a spinning tire will quickly soften the coating causing permanent damage.

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 to yellow-like stain that may be permanent. This can be more noticeable where aircraft or vehicles are stationary for longer periods of time, more so in non-climate-controlled environments such as aircraft hangars with lighter colored floors. To avoid plasticizer staining, use a piece of Plexiglas® or LEXAN® panels, cut a few inches in diameter larger than the tires that will rest on the panels, between the floor & the contact point of the tire when storing rubber-tired vehicles on any floor, including floor coating systems. Some tire stains can be removed if cleaned before a set-in stain occurs using a d-Limonene based degreaser with mild agitation via an orbital, low speed floor machine.

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