

## Product Data Sheet

**DESCRIPTION:** CEM's SPAR R0-500 is a High Performance, Low Odor, High Solids, 2-Component, Aliphatic Polyaspartic with a gloss finish and a **25 minute** working time at 72°F / 50% Humidity. This product yields a U.V. stable, hard, resilient film with good chemical resistant properties.

CEM's SPAR R0-500 may be used for a variety of applications to include body coats and wear surfaces for commercial, industrial, or residential traffic environments, such as a high build topcoat over CEM Metal floors (>8 mils WFT) or as the body coat mixed with metallic; as a body coat or grout coat for Vinyl Chip and Color Quartz systems; as a pigmented grout coat over solid color Cementitious Polyurethane Resurfacers in food processing/production environments, etc., where lower odor, good chemical resistance, durability and color stability is required.

### RECOMMENDED USES:

- Institutional, Retail, Commercial & Residential Environments
- High Build, High Gloss Topcoat for CEM Metal (>8 mils)
- Food & Beverage Floors
- Schools & Universities
  - Locker Rooms ◦ Shower Stalls ◦ Corridors / Hallways ◦ more
- Museums
- Pharmaceutical
  - Laboratories ◦ Production Areas ◦ Break Rooms ◦ Restrooms

### HIGHLIGHTS:

- For Interior & Exterior<sup>1</sup> Use
- Next day return to service - Forklift traffic after 24 to 44 hours<sup>2</sup>
- Highly Durable
- Good Working Time
- Easy to Clean
- Resistant to Hot Tire Pickup
- Hot Liquid Spill Tolerant to 230°F (121°C) when applied over a thermal shock resistant coating system, such as Smith's CPR or similar
- Meets FDA & USDA standards for flooring

### STORAGE:

Indoors between 40°F (4.4°C) to 90°F (32.2°C)

### SUBSTRATE SURFACE TEMPERATURE:

45°F (7.2°C) to 85°F (29.4°C) with 25% to 80% Ambient Humidity

*\*Although Polyaspartic products cure properly below the recommended installation temperature range, the viscosity will be much thicker & working properties may not be desirable for the system; NOT Recommended below:*

- below 65°F over smooth surfaces as <8 mil smooth topcoat
- below 55°F over Quartz broadcast floors or Vinyl Chip full broadcast floors

### SHELF LIFE:

12 Months in original, unopened containers;  
Use within 30 days of opening

### KIT SIZES:

CEM's SPAR R0-500      Brush / Roller application  
Gloss, 1.5 Gallon Kit  
Gloss, 15 Gallon Kit

### COLOR:

Clear; Optional CEM Color CEM Metal Packs colors sold separately.

**CURE TIMES:** \*Higher temperatures & humidity will shorten pot-life.

Temperature @ 50% Humidity	55°F	72°F	85°F
<b>Pot-life</b>	50 min.	30 min.	20 min.
<b>Working Time</b>	8 mils = 30 min. 20 mils = 35 min.	8 mils = 20 min. 20 mils = 25 min.	8 mils = 15 min. 20 mils = 20 min.
<b>Tack Free</b>	8 mils = 8½ hrs. 20 mils = 11 hrs.	8 mils = 4½ hrs. 20 mils = 6 hrs.	8 mils = 4½ hrs. 20 mils = 6 hrs.
<b>Recoat Window (Sand after max.)</b>	8 mils = 16 hrs. 20 mils = 22 hrs. Max = ≤28 hrs.	8 mils = 11 hrs. 20 mils = 14 hrs. Max = ≤24 hrs.	8 mils = 9 hrs. 20 mils = 12 hrs. Max = ≤18 hrs.
<b>Foot Traffic</b>	8 mils = ≤30 hrs. 20 mils = ≤32 hrs.	8 mils = ≤22 hrs. 20 mils = ≤24 hrs.	8 mils = ≤18 hrs. 20 mils = ≤20 hrs.
<b>Heavy Traffic<sup>2</sup> (Vehicular/Forklift)</b>	8 mils = 40 hrs. 20 mils = 44 hrs.	8 mils = 30 hrs. 20 mils = 32 hrs.	8 mils = 24 hrs. 20 mils = 28 hrs.
<b>Max. Chemical Resistance</b>	6 to 7 days	3 to 4 days	±3 days

### CURED COATING PROPERTIES (DRY FILM):

Property	Test Method	Results
<b>Abrasion Resistance, mg/loss*</b> Taber Abraser	ASTM D4060	76 mg loss (0.076 gram loss)
Hardness (Pencil)	ASTM D3363	2H
<b>Hardness</b> (Shore D)	ASTM D2240	60
Adhesion to Concrete	ASTM D4541	Concrete Fails
<b>Adhesion to Steel - Pull Strength, psi (MPa)</b>	ASTM D4541	≥3,000 psi (≥20.68 MPa)
1/8" Cylindrical Mandrel Elongation	ASTM D522	Pass
<b>Gloss 60°</b>	ASTM E1477	≥90 Gloss
Viscosity (Mixed)	ASTM D2196	350 to 380 cP
<b>VOC's</b>	ASTM D3960	127 g/L
Solids Content (Mixed)	ASTM D2196	86% by weight
<b>Mix Ratio by Volume</b>		2A to 1B

\*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.

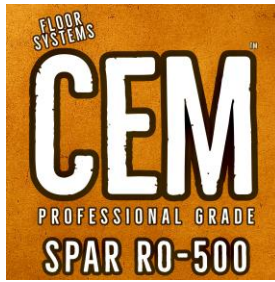
### APPROXIMATE COVERAGE:

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

A one gallon mixture of CEM's SPAR R0-500 will cover:

Coverage Equation:  $1604 \div \text{mils} = \text{Wet Film Thickness} \times 0.86 = \text{Dry Film Thickness}$

Mil Thickness WFT (DFT)	Yield per mixed gallon
8 mils WFT (6.88 mils DFT)	200 sq.ft./gal
10 mils WFT (8.6 mils DFT)	160 sq.ft./gal
12 mils WFT (10.32 mils DFT)	133 sq.ft./gal
15 mils WFT (12.9 mils DFT)	106 sq.ft./gal
18 mils WFT (15.48 mils DFT)	89 sq.ft./gal



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20 mils WFT (17.2 mils DFT)

80 sq.ft./gal

### Typical Chemical & Stain Resistance

ASTM D 1308 Test Method 3.1.1.3 Covered Spot Test of a 5 mil pigmented film after a 7 day cure prior to testing. Results are based on 24 hours covered exposure

E - Excellent; G - Good (slight sign of exposure/stains, coating recovers);

NR - Not Recommended (Permanent Damage)

ACIDS	24 hour Exposure
Acetic Acid 25% (Vinegar)	G (slight sign of exposure)
Citric Acid 10%	E
Lactic Acid 88% (Milk)	G
Phosphoric Acid 85%	G
Sulfuric Acid 25% (Battery Acid)	E
Sulfuric Acid 98%	NR (Destroyed Film)
Hydrochloric Acid 32% (Muriatic)	E
Nitric Acid 50%	NR (Stains / Softens / Swells)
Uric Acid	G (Stains)
BASES	
Ammonium Hydroxide 10%	E
EBGE	E
Sodium Chloride 20%	E
Sodium Hydroxide 50%	E
Sodium Hypochlorite (Bleach)	E
Trisodium Phosphate 10%	E
ALCOHOLS	
Ethylene Glycol (Antifreeze)	E
Hand Sanitizer	G (slight sign of exposure)
Isopropyl Alcohol 91%	G (slight sign of exposure)
Methanol	G (slight sign of exposure)
SOLVENTS	
Acetone	E
d-Limonene	E
MEK	G (slight sign of exposure)
Methylene Chloride	NR (Etch)
Mineral Spirits	E
PGMEA	G (slight sign of exposure)
HYDROCARBONS	
Brake Fluid	G (slight sign of exposure)
Gasoline	E
Hydraulic Fluid	E
Kerosene	E
Motor Oil (SAE 30)	E
Transmission Fluid	E
Skydrol® - LD-4	G (Etch / Stains)
MISCELLANEOUS	
Coffee	E
Coke	E
Dish Detergent (Dawn®)	E
Hydrogen Peroxide 3%	E
Ketchup	E
Monster Energy® Drink	E
Mustard	E
Povidone-iodine (BETADINE®)	G (slight sign of exposure)
Tide® 1%	E
Windex® (Ammonia Based)	E
Wine - Red	E

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**TEMPERATURE & HUMIDITY:** Substrate temperature & materials must be maintained between 45°F (7.2°C) to 85°F (29.4°C) with 25% to 80% Ambient Humidity for 24 hours before & 24 hours after installation. Do not install coatings when the Dew point is ±5° of the

air temperature.

### PRECAUTIONS / WARNING:

**Contains Solvent - Material is Combustible**

- Keep away from sparks, heat & open flame - Extinguish all flames, pilot lights & electric motors until all vapors are gone & the coating is hard
- Use with adequate ventilation when mixing, applying & curing
- DO NOT SPRAY - Product may emit harmful solvent & isocyanate vapors when spray applied which can cause respiratory irritation. Individuals with chronic lung or breathing problems or negative reaction to isocyanates, should not use this product



### PERSONAL PROTECTION EQUIPMENT RECOMMENDED:

- Use of a self-contained respiratory equipment (TC 19C NIOSH/MESA) - Avoid inhaling atomized spray & fumes
- Wear Chemical Resistant Gloves - Avoid all contact with skin
- Wear Chemical Resistant Eye Protection - Prevent contact with eyes

**INSPECT THE SUBSTRATE:** Ensure substrate is structurally sound, solid & free of bond breaker contaminants, such as oil, paint, densifier / sealers, curing compounds, wax, silicone, etc.

### MOISTURE:

**Concrete** - Testing concrete moisture vapor via both the Calcium Chloride (ASTM F1869) and In-situ Relative Humidity (ASTM F2170) methods is highly recommended to accurately determine both the Moisture Vapor Emission Rate (ASTM F1869) and the available Moisture Content (ASTM F2170) at the time of testing. Using only one test method will not provide all the necessary information nor indicate other potential risks such as contaminants, etc. that may pose a risk for delamination, chemical attack, etc. which are not caused by moisture vapor emissions or high alkalinity.

Maximum moisture readings are as follows:

ASTM F2659 <4% MC (used to determine placement of below test locations)

ASTM F1869 <3 lbs. / 1,000 sq.ft. / 24 hours with 9 to 12 pH

ASTM F2170 <75% Relative Humidity

Testing pH levels with a pH pencil or Litmus paper along with distilled water is a very inexpensive, easy way of identifying a potential risk, in conjunction with Moisture Vapor testing methods to determine whether more in-depth testing should occur.

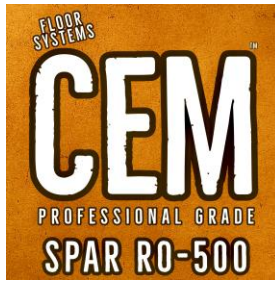
CEM's MVB, in conjunction with proper testing and mechanical preparation, will reduce the moisture vapor emission rate to a level within the tolerance of subsequent coatings and traditional floor covering needs.

Follow the testing manufacturer's instructions precisely or visit [www.astm.org](http://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 and conclusive.

CEM Coatings Group, Inc. 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 with appropriate certifications and credentials.

**Wooden Substrates** - No greater than 12% is recommended prior to coating when using a wood substrate moisture meter.

**Chemical Contamination** - Additional testing may be required to determine the type of chemical contaminant, such as Petrographic core analysis. Once type of chemical is identified, contact Smith Paint Products for recommendations.



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**Oil Contamination** – CEM's *Oil Stop* may be used to remove oils, such as petroleum, synthetic and food oils, from the surface of the concrete prior to mechanical preparation. Once oil has been removed from the surface and thoroughly rinsed with clean, potable water, mechanically prepare the concrete as stated on the next page. If oil continues to "weep" out of the concrete after mechanical preparation, clean again with *CEM Oil Stop* then encapsulate the oil/grease remaining in the concrete while the substrate remains damp with water but ensure no standing puddles exist prior to application of 10 to 12 mils of primer. Allow to cure for a minimum of 5 hours or overnight then use an 80 to 100 grit sanding screen under green pad on a floor machine:

- Orbital floor machine =  $\leq 300$  rpm & lightweight
- Square head floor machine = approx. 3,000 rpm with no added weight

to abrade the surface and remove any contaminants that may have floated to the surface of the epoxy before it hard set. Vacuum off the sanding dust then tag rag with Acetone (*DO NOT USE Denatured Alcohol or Xylene for this application*)

### NECESSARY TOOLS & EQUIPMENT:

- Plastic Sheeting or Ram Board to cover floor for mix station
- Jiffy mixing paddle or Paint mixing paddle
- Self-contained respiratory equipment/mask (TC 19C NIOSH/MESA)
- Low speed  $\frac{1}{2}$ " drill (Variable Speed  $\leq 450$  rpm)
- 5 gallon Plastic Mixing Buckets
- Premium, Non-Shed  $\frac{3}{8}$ " Nap Paint Roller Covers
- Several 18" wide, non-metallic Paint Roller Frames
- Notched & Flat Blade Squeegees (application specific)
- Multiple Extension Poles
- Spiked shoes or Cleats
- Cleaning Solvent (Acetone, MEK, Xylene)

### LIMITATIONS:

- Do NOT use over MMA (*Methyl Methacrylate*)
- An "orange peel" texture may occur when:
  - Applied less than 8 mils Wet Film Thickness
  - During higher humidity / temperature installations
  - When applied in cool temperature installations below 65°F (18.3°C), including product, substrate and/or air temperature at time of application. Especially when applied at less than 15 mils WFT
- U.V. Stable refers to Smith's Polyaspartic 5000<sub>LO</sub> only
  - A clear film does not protect underlying non-U.V. Stable layers from damage nor discoloration from light exposure
- NOT INTENDED FOR USE over EXTERIOR DECORATIVE CONCRETE as moisture & efflorescence may become trapped beneath this product<sup>1</sup>
- Consistency of liquid product will become thicker when cool ( $< 65^\circ\text{F} / 18.3^\circ\text{C}$ ) lessening leveling & defoaming properties while extending cure rate with lower temperature / increased product viscosity.
- CEM's SPAR RO-500 is not recommended over caulking, silicone, or flexible joint fillers (i.e. Polyurea, flexible urethane, etc.).
- Although Polyaspartic products cure properly below the recommended installation temperature range, the viscosity will be much thicker & working properties may not be desirable; *NOT Recommended*:
  - below 65°F over smooth surfaces as a  $< 8$  mil smooth topcoat
  - below 55°F over Quartz broadcast floors or Vinyl Chip full broadcast floors
- NOT RECOMMENDED FOR USE OVER UNDERLAYMENT GRADE PATCH / LEVELERS to include gypsum-based as well as polymer modified synthetic gypsum-based patch / underlayment

**TEMPORARY HEAT:** Moisture vapor is emitted by fueled temporary heaters which creates condensation (*i.e. Dew Point*) on a floor surface and may cause an amine blush with epoxy products. Some temporary heaters may emit unburned petroleum into the air, especially if the equipment is not functioning properly, which will act as a bond breaker once it falls onto the surface of the substrate.

Take precaution 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 occurring with epoxy based products
- Fisheyes are a result of surface contamination or an amine blush on an epoxy based previous layer which must be cleaned off in addition to mechanical preparation
  - Solvent wiping the substrate is not sufficient for removing these residues
  - After mechanically preparing surface, always clean the surface with *CEM's Oil Stop* or TSP using an auto-scrubber followed by a thorough clean water rinse when temporary heat has been used to minimize risk of surface defects and/or peeling.
- Ensure exhaust emissions & toxic fumes from temporary heaters exhaust to the exterior of the building to prevent health hazards & damage to work

**SUBSTRATE PREPARATION:** Detergent scrub with *A Neutral Detergent*, or similar, then rinse with clean, potable water to remove surface dirt, light surface grease/oil and contaminants prior to mechanical preparation. Use *CEM's Oil Stop* to remove heavy grease or oil. If a densifier or dissipative curing compound is believed to have been present, use biodegradable etching gel after mechanical preparation methods.

**NOTE - DO NOT USE MURIATIC/HYDROCHLORIC ACID TO PREPARE CONCRETE AS CHLORIDE CONTAMINATION CAN OCCUR.**

### **Previous Layer Beyond Recoat Window OR Preparing an**

**Existing Resinous Coating** – Adhesion to any existing coating system is only as good as the adhesion the existing coating system has to its substrate. Always test to determine the suitability of an existing substrate and mock-ups are highly encouraged. Allow the mock-up to cure for no less than 1 week before performing adhesion testing, such as a tape test or using a pull off adhesion test per ASTM D 4541 (*i.e. DeFelsko, Elcometer or similar*). When in doubt, remove existing coatings or ceramic tile down to a sound, solid concrete substrate.

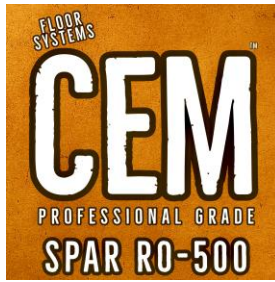
Clean to remove any bond breakers (*i.e. oils, silicone, paint, debris, dust, etc.*) then mechanically grind or sand the entire surface to be coated to a uniformly dull, "white" finish with no shiny areas then vacuum to remove the heavy dust/debris followed by solvent tack ragging with using a Micro-fiber mop with Acetone, replacing with a clean, fresh Micro-fiber pad often. Repeat until no dust can be seen after wiping a finger or dark cloth across dry floor surface.

**Joint Filler** – Saw cut all joints and moving cracks open with a diamond cutting blade then fill with an appropriate semi-rigid joint filler. Allow to fully cure then diamond grind flush to surrounding surface elevation, vacuum then solvent tack rag prior to applying next layer. Honoring the joint at the surface after the coating is applied then fill with an appropriate joint filler can lessen joint telegraphing.

Please refer to the appropriate system guide for recommended repair practices for the system being installed.

CEM's SPAR RO-500 is not recommended over caulking, silicone, or flexible joint fillers (*i.e. Polyurea, flexible urethane, etc.*).





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**Substrate Repairs** – Substrate Repairs – Patching of chips, gouges, etc. may be repaired with a variety of different, compatible coating materials. Ensure resinous patching products are hard enough to walk on without imprinting or damage before proceeding.

Repairs utilizing water-based cement compounds must be fully cured to avoid “flash curing” Polyaspartic products, which are moisture cured. Cementitious compounds require additional cure times prior to coating with a high solids resinous coating. Ensure the following for proper adhesion and long term performance:

- Fully cured which can be tested per ASTM F2659 with ≤4% MC or a mat test for no less than 4 hours per ASTM D4263
  - Portland Cement based = 2 to 3 days for each ¼” average of thickness
  - CSA & Polymer Modified Calcium Alumina-based cement = 24 hours for each ¼” average of thickness
- Rated for interior & 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 gypsum-based (as well as polymer modified synthetic gypsum-based patch / underlayment).
- Non-water soluble
- Minimum 5,000 psi. once fully cured

### **Preparing a neat Cementitious Urethane for sealing –**

Raw (without a broadcast): Abrade surface using 80 to 100 grit metal screens or sandpaper using an orbital low speed floor buffer or grind using 120 grit soft bond metal diamonds (*DO NOT USE Resin Bond Diamonds*) using an appropriate diamond grinder. Abrading the surface may occur once the surface of the Cementitious Polyurethane Mortar is not able to be damaged by the desired method, typically after curing for approximately 12 hours for regular curing formula cementitious polyurethane products. More aggressive grit screens or sandpaper may create scratches, swirls and grooves in the finish of the cementitious polyurethane, especially within 12 to 14 hours after the initial application which topcoats and subsequent thin layers may not hide. Hard to reach areas or any depressions should be made uniformly dull using an orbital palm sander and 80 to 120 grit sandpaper. Done correctly, the surface should be uniformly dull with no scratches easily identified.

Once uniformly dull and properly abraded, vacuum entire surface followed by either a thorough Acetone solvent tack rag wipe or use an auto-scrubber with white, soft nylon bristle brushes and a very mild neutral detergent, such as A *Neutral Detergent*, or dish detergent (**DO NOT USE SIMPLE GREEN®**) then a clean water rinse. Once dry, ensure all surface dust has been removed before proceeding with the next layer. *DO NOT ALLOW DETERGENT TO DRY ON THE SURFACE.*

**Applying over a New Coating** – Ensure the previous layer has cured enough to receive another layer, shows no indication of blushing and has NOT exceeded the recoat window. Correct any surface imperfections in the previous layer prior to applying CEM’s SPAR RO-500. If the previous layer has cured beyond the recoat window OR when a high gloss smooth finish is desired, the surface must be mechanically abraded using 100 to 120 grit sandpaper or sanding screens to a uniformly dull surface with no remaining shiny areas then use Acetone and a Microfiber mop to tack rag clean all residual dust/debris prior to applying CEM’s SPAR RO-500.

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**MIXING:** Premix Part A for approximately 1 minute using a clean, paint mixing paddle on a low speed ½” drill (<450 rpm). Combine Parts

A & B to continue mechanically mixing for 2 to 3 additional minutes.

### **DO NOT STICK MIX!**

Mix station & all application equipment should be ready for immediate use prior to mixing any product. Higher temperatures & humidity will shorten working time.

*DO NOT TURN THE MIXING VESSEL UPSIDE DOWN* allowing the mixing vessel to drain on to the substrate to avoid risk of any unmixed or non-thoroughly catalyzed product from the bottom or sides of the mixing vessel from contaminating the floor.

**Mixing By Volume** – Shake Part A for 30 seconds. Measure 2 Parts A to 1 Part B then combine in a clean, appropriate size mixing vessel. Mix using a low speed drill (≤450 RPM) with paint mixing paddle for 3 minutes.

**CEM Metal Body Coat** – Add 1 unit of CEM Metal to 1 gallon SPAR RO-500 Part A then mechanically mix using a low speed ½” drill (≤450 rpm) with a paint mixing paddle for roughly 3 minutes to ensure no powder lumps remain in the liquid. The ratio may vary between 4 up to 16 ounces per mixed gallon of liquid to achieve an assortment of mottling effects.

Combine 1 gallon Part A (*previously mixed with CEM Metal*) with ½ gallon Part B then mechanically mix with a low-speed drill (≤450 RPM) with a paint mixing paddle for 2 to 3 minutes.

- Ensure no lumps remain in the mixed solution before proceeding
- Should lumps remain, pour the mixture through a paint strainer

Pour the mixture onto the floor at a rate of 80 to 106 sq.ft. per gallon over a properly primed substrate. *See application guide for detailed system application instructions.*

**High Gloss Topcoat over CEM Metal** – Sand to thoroughly degloss the metallic body coat, vacuum then use a fresh, clean microfiber mop to remove any remain dust then tack rag with a lightly Acetone dampened fresh microfiber pad to tack rag. *DO NOT USE Denature Alcohol prior to applying Polyaspartic!*

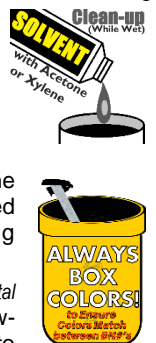
Pour a ribbon CEM’s SPAR RO-500, evenly spread using an 8 to 12 mil V-notched squeegee then back roll with a 3/8” nap, solvent resistant non-shed paint roller.

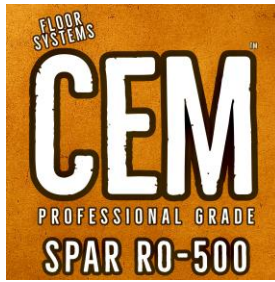
NOTE: An “orange peel” texture may occur when:

- Applied less than 8 mils Wet Film Thickness
- Applied during high humidity / temperature
- Cool temperature installations below 65°F (18.3°C), including product, substrate and/or air temperature at time of application. Especially when applied at less than 15 mils WFT in cool temperature installations

**SLIP RESISTANCE:** CEM Coatings Group, Inc. 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.





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Use CEM'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 and no less than 48 hours before neutral cleaner or water exposure. This includes auto-scrubbers, swing buffers, sweepers, etc. Only dust and wet mopping may occur the first 48 hours after finishing application.*

[\\*Click here for in-depth maintenance and cleaning recommendations](#)

Dust mopping, removal of debris and regular cleaning is crucial to maintaining the aesthetics of the coating and obtaining the maximum life span of the floor coating system. Cleaning cannot occur too often and inefficient cleaning will cause the floor to wear out prematurely and 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 and lessen the sheen.

To maximum your investment with proper floor care and 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 and a set day per week or month for heavy cleaning:

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

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

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**DETERGENT:** Always use the least aggressive detergent necessary to remove the soil to help optimize the performance and longevity of the floor coating system. A *Neutral Detergent*, or similar, may be used for general purpose cleaning. CEM's Oil Stop or similar degreaser, for more degreasing and 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 and high-

performance car tires. Plasticizer will stain coating and commercial flooring leaving an amber, yellow-like stain that can be permanent. This can be more noticeable where aircraft or vehicles are stationary for longer time period, more so in non-climate controlled environments such as aircraft hangar 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 and 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

- Avoid using "no rinse" cleaners or cleaners which may leave a residue on the surface, such as simple green®, as these products tend to build up a film causing the surface to become slippery, especially when damp, as well as attract soils and/or stains more than an appropriate cleaner.

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