



## Application Instructions

# EPOXY U100 – RANDOM FLAKE SYSTEM

PDS-EPOXRFS-52418

These instructions are not intended to show product recommendations for specific service. They are issued as an aid in determining correct surface preparation, mixing instructions and application procedure. These instructions should be followed closely to obtain the maximum service from the product.

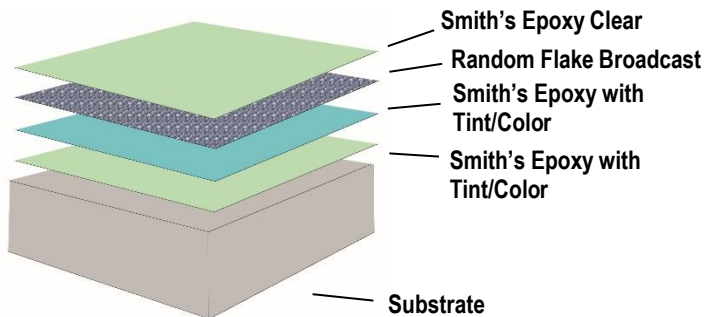
### DESCRIPTION:

Smith's Epoxy Random Vinyl Chip System is an economical, decorative seamless floor coating system ideal for light commercial as well as residential garage flooring. This is an economical system with numerous color options that results in a unique decorative installation.

### HIGHLIGHTS:

- Resistant to Hot Tire Pick-up
- Good Stain and Chemical Resistance
- Decorative
- Economical
- Low Odor and VOC's – Available in all regions

### Random Broadcast Vinyl Chip Floor – Roughly +15 mils



### NECESSARY TOOLS and EQUIPMENT:

- Plastic Sheeting or Ram Board to cover floor for mix station
- Jiffy mixing paddle
- Low speed ½" drill (Variable Speed 650 rpm or less)
- 5 gallon Plastic Mixing Buckets
- 18" wide Premium, Non-Shed 3/8" Nap Paint Roller Covers
- 18" wide Premium, Non-Shed 1/2" Nap Paint Roller Covers
- 18" wide, non-metallic Paint Roller Frames
- Multiple Extension Poles
- Window Squeegee (Seal Coat placement)
- Self-contained respiratory mask
- V-Notched 8-12 mil Squeegee (Body Coat placement)
- Spiked shoes or Soccer Cleats
- Cleaning Solvent (Acetone, MEK, Xylene)

**NOTE:** The mix station and all application equipment should be ready for immediate use prior to mixing any product. Higher temperatures and humidity will shorten pot life.

**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.

**SURFACE PREPARATION:** The surface preparation phase of a floor coating system should be viewed as the most important. Proper floor preparation results in the product's longevity, minimizes potential failures and creates the best environment for an aesthetically pleasing installation. In short, the more detail and time allotted to this phase of the project will dramatically affect the appearance as well as the durability of the finished floor.

1) Allow new concrete to cure for at least 28 days. Application of Smith's Epoxy U100 to a damp surface or incompletely cured concrete may cause loss of adhesion. Moisture Vapor Testing is always recommended when coating directly over concrete.

*\*See "Moisture /Alkalinity" section preceding for more details*

2) Remove paint, adhesives and loose particulates from the intended application surface

3) Concrete Surface Profile - CSP 2 to CSP 4 must be achieved via mechanical grinding with a 30 (or less) metal bonded diamonds or shotblasting. If water is introduced to the intended application area, allow substrate to fully dry

**CHECK FOR MOISTURE:** Testing concrete moisture via both Calcium Chloride (ASTM F1869) and In-situ Relative Humidity testing (ASTM F2170) is recommended.

#### Acceptable Readings:

- Calcium Chloride testing (ASTM F1869)  
<10 pounds and between 8.5 to 11.5 pH
- Relative Humidity (ASTM F2170)  
<85%

Testing which occurs in non-acclimated interior environments will void the results. 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.

Should moisture vapor emissions exceed the above thresholds, an appropriate moisture vapor remediation primer, such as Smith's Epoxy MAC100 Regular Cure, Smith's Epoxy MAC125 Fast Cure or similar epoxy based moisture remediation primer with a full broadcast of sand. 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.

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 (generally, but not limited to interiors). Smith Paint Products is not responsible for failures due to the presence of moisture vapor emissions and/or high levels of alkalinity.





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**CONTAMINATION OF SUBSTRATE:** 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.

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

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

**MIXING INSTRUCTIONS:** Mix only that amount of Epoxy U100 that can be used in 30 minutes at 72°F and 40% RH. Higher temperatures and/or high humidity reduce pot life.

Mixing Ratio: Add 4 to 8 ounces (113-226 grams) of Metallic & Luster color per mixed gallon of Smith's Epoxy U100. Epoxy U100 is a 2 Part A to 1 Part B by volume mixture. Therefore, 1 to 2 units of Metallic & Luster may be added to an entire 3 gallon kit of Epoxy U100.

Measure the amounts carefully and mix counter-clockwise for one full minute using a low speed drill with a paint mixing paddle ensuring both the bottom and sides of the mixing container have been thoroughly blended.

**DO NOT MIX AT HIGH SPEEDS** to avoid air and moisture entrapment.

**NOTE:** Mechanical agitation is recommended

**APPLICATION METHOD:** Smith's Epoxy U100 may be applied via brush, roller and/or squeegee.

**ROLLER APPLICATION:** Use a 3/8 inch non-shed chemical resistant roller cover.

**BRUSH APPLICATION:** Utilize traditional bristle brush application for corners and edges.

**INSTALLATION:** *Cure times based on 72°F – 40% RH*

- STANDARD PRIMER** - Apply a thin coat of Smith's Epoxy U100, Epoxy P110 or Epoxy FC125 with EC Epoxy Color Pack (Black or White recommended) at a rate of 5-7 mils  $\approx$  225-320 sq.ft. per gallon. Allow to cure:
  - Epoxy P110 = 4 – 5 hours
  - Epoxy FC125 Fast Cure = 2 - 3 hours
- BODY COAT** - Apply a body coat of Smith's U100 Epoxy U100 or Epoxy FC125 with EC Epoxy Color Pack at a rate of 5-7 mils  $\approx$  225-320 sq.ft. per gallon pouring out in ribbons then spread with a squeegee followed immediately by back rolling. Allow to cure:
  - Epoxy U100 = 4 – 5 hours
  - Epoxy FC125 Fast Cure = 2 - 3 hours
- Immediately begin randomly and lightly broadcasting Smith's Vinyl Chip into the fresh Epoxy at a rate of 0.02-0.04 lbs. per sq.ft. Allow to cure:
- Scrape off any ridges of Vinyl Chips using a drywall tape knife or similar then vacuum the entire surface thoroughly to ensure all loose Vinyl Chip has been removed
- GROUT COAT** - Apply a grout coat of Smith's U100 Epoxy U100 or Epoxy FC125 clear a rate of 5-7 mils  $\approx$  225-320 sq. ft. per gallon pouring out in ribbons then spread with a squeegee followed immediately by back rolling. Allow to cure:
  - Epoxy U100 = 4 – 5 hours
  - Epoxy FC125 Fast Cure = 2 - 3 hours

	Material	Surface	Ambient	Humidity
<b>Best</b>	60°-80°F	65°-80°F	65°-85°F	10-60%
<b>Minimum</b>	50°F	50°F	50°F	0%
<b>Maximum</b>	90°F	90°F	95°F	70%

- Do not apply when substrate has direct sun

- High humidity will decrease pot life.

- USE Smith's Polyaspartic 4000 Series for Low Temperature installations

**RECOATING:** Smith's Epoxy U100/FC125 should be recoated as soon a previous coat is dry to the touch. If recoating after 24 hours has elapsed, degloss existing sealer film with a black janitor pad, 80-100 grit sandpaper or sanding screen.

**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-





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scrubbers, swing buffers, sweepers, etc. Only dust and wet mopping may occur the first week.

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.

Tynex® is a registered trademark of E. I. du Pont de Nemours and Company.

**DETERGENT:** Always use the least aggressive detergent necessary to remove the residue. Smith's Neutral Clean, or similar, may be used for general purpose cleaning. Use Smith's Oil Clean, 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 pallets, 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 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 period of time, 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 is cleaned before a set-in stain occurs using a d-Limonene based degreaser and some mild agitation using an orbital, low speed floor machine.

- Material is combustible. Extinguish all flames, pilot lights and electric motors until all vapors are gone and the coating is hard. Keep away from sparks, heat and open flame. Use with adequate ventilation when mixing, applying and curing. Product emits harmful solvent and isocyanate vapors which can cause respiratory irritation. Individuals with chronic lung or breathing problems or negative reaction to isocyanates, should not use this product. The use of a self-contained respiratory equipment (TC 19C NIOSH/MESA) is recommended. Prevent all contact with skin. Use impermeable gloves and chemical resistant eye protection.

LEXAN® is a registered trademark of Saudi Basic Industries Corporation (SABIC). Plexiglas® is a registered trademark of Arkema

**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.

**LIMITED LIABILITY:** Liability is limited to replacement of defectively manufactured product with same type and cost of the original purchased product upon presentation of a valid, fully paid invoice at the time of a claim. No warranty shall be granted for outstanding invoices or for accounts with unpaid balances until paid in full. No damages, whether consequential, liquidated or other, shall be provided under this Limitation of Liability and Limited Warranty. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SMITH PAINT PRODUCTS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MECHANABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SHOULD YOU NOT AGREE WITH ANY OF THE ABOVE TERMS, DO NOT PURCHASE THE PRODUCT(S). Should a product defect be suspected at the time of



# Smith's

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application, cease use of the product immediately and notify Smith Paint Products for investigation otherwise you will be responsible for the cost to repair or replace any work performed with product(s) suspected of defect. Record batch codes and save all products you purchased in order for any warranty to occur allow with the invoice that matches said quantity. Defects determined after installation must be reported to Smith Paint Products within 10 business days of discovery.

Upon information, belief and to the best of our knowledge, the information contained herein is true accurate as of the date of issuance of this particular document and any and all information conveyed, whether expressed or implied. Is subject to change without prior notice. We guarantee our products to confirm to Smith Paint Products quality control standards, but not to any other standards unless specifically stated in written documentation. Smith Paint Products assumes no liability for coverage, performance, injury results from use, misuse or usage not described in any promotional materials or regulatory infraction determined by using our products. The applicator assumes all liability for use and local regulatory compliance. Promotional materials are not a supplementation to any product purchase agreement, nor should such documents be considered a type of contract, if any is reduce to writing.

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