



# TECHNICAL DATA SHEET

## 100% SOLID EPOXY

### PRODUCT DESCRIPTION

100% Solids Epoxy is a two component, high performance, modified cycloaliphatic epoxy concrete floor coating system. 100% Epoxy has features for highgloss, low odor, solvent-free, abrasion, and chemical resistance. It has excellent bonding characteristics and it can be applied as a 8 to 50 mil coating system. Its design features provide for the highest industrial and commercial demands. It can also be used to mix with silica sand to make an epoxy mortar to restore damaged concrete or to use the epoxy mortar as a floor surfacing overlay to protect the concrete from impact and wear and resist chemical attack if properly sealed with the same product. It can also be mixed with sand in a slurry consistency to fill voids or coat concrete surfaces. It is non-porous & sanitary, easy to clean.

### AVAILABLE COLORS

- Clear
- Light Gray
- Medium Gray
- Dark Gray
- White
- Black
- Tan
- Beige
- Tile Red
- Safety Red
- Safety Blue
- Safety Green
- Safety Yellow

### APPLICATIONS

The uniqueness and universality of hardcoat solutions chemistry facilitates the applications where USDA Food & Beverage and other regulatory requirements must be obtained. i.e. food manufacturing and preparation, pharmaceutical manufacturing and dispensaries, clean rooms, commercial kitchens, laboratories and more. Other areas of use include: garage floors, rest rooms, manufacturing facilities, automotive showrooms and schools.

### PRODUCT DATA

Volumetric Ratio	2 to 1
Solids	100%(+/- 1%)
Coverage	100-200 sqft/gal.
Application Temperature	55°-90°F
Thinning	Not Required
Pot Life	5 min.
Working Time on Floor	20-30 min.
Cure Time	12-16 hrs (walking)
Full Cure	5-7 days
Critical Re-Coat Time	10 to 12 hrs depending on Temperature
Shelf Life	12 months
USDA Food & Beverage	Meets Req.
Prior to rolling out a 2nd coat of either epoxy or sealer, surface must be profiled by means of a 17" Clark floor buffer using 100 Grit screens. NOTE: If Accelerator is used in the epoxy there is no re-coat window.	

### ADVANTAGES

- Essentially odorless
- Self-priming over properly prepared substrate
- Zero VOC
- High color stability, High gloss
- Non-porous & sanitary
- Withstands medium traffic as thin as 12 mil
- Chemically resistant
- No amine blush
- Easy to clean

### PROPERTY

Compressive Strength  
Flexural Strength  
Tensile Strength  
Bond to Concrete  
Taber Abrasion  
Flammability  
Hardness, Shore D  
Coefficient of Friction

### VALUE

3,800 psi  
3,700 psi  
3,900 psi  
350 psi  
75-80 Mgs  
Self-extinguishing  
84  
0.6

### REFERENCE

ASTM C 695  
ASTM D 790  
ASTM D 638  
ASTM D 4541 (Concrete fails at this point)  
ASTM D 4060  
ASTM D 2240  
ASTM D 1894



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### CONCRETE PREPERATION

#### Before coating is applied, concrete must be:

- Dry – No wet areas
- Clean – Contaminants removed
- Profiled – Surface must be diamond ground to a CSP (Concrete Surface Profile) rating of "2"... Roughly the feel of 100 Grit Sandpaper.
- Sound – All cracks and spalled areas repaired

Note: Mechanical preparation is the preferred method of preparing concrete for coating application. Shot-blasting, diamond grinding, scarifying and scab-bling are all acceptable methods.

### REPAIR CRACKS

Voids, cracks and imperfections will be seen in finished coating if the concrete is not patched correctly. Joint Filler (Crack Repair) and/or Rapid Mender to fill cracks and imperfections. After the materials are cured, diamond grind patch. If another patching material is used, contact a hardcoat solutions technical representative for a compatible and approved alternative.

### TESTING

All surfaces are not the same. It is recommended that a sample area be done before the start of the project. The test should be done on-site, using the proposed method by the assigned applicator to insure proper adhesion and color. A sample area should also be done on any existing coatings to determine if any contaminants exist or if delaminating will occur.

### APPLICATION INSTRUCTIONS

Application of 100% Solids Epoxy for a nominal 16 to 20 mil coating system is applied in two coats and in one pass as a top coat. For estimation purposes, use 200 SF per gallon in either case.

1. Always apply in descending temperatures. Concrete is porous and traps air. In ascending temperatures (generally mornings) the air expands and can cause out gassing in the coating. It is safer to apply coatings in the late afternoon, especially for exterior applications.

2. Optimum ambient temperature should be between 55-90°F during application. Note: Cure times are affected by ambient and slab temperatures. Temperatures of 55°F and lower can slow cure times. Temperatures of 85°F and higher will shorten working times.

3. Mix as little as 3 Qrts (2Qrts of A & 1 Qrt of B) or as much as 3gallon using above mixing instructions.

4. Apply approximately 200 SF per gallon (100 SF per gallon for a top coat over Industrial Quartz systems) by immediately pouring out on surface in a ribbon, while walking and pouring at the same time until bucket is empty. DO NOT SCRAPE SIDES OF BUCKET.

5. Using a squeegee on a pole, pull hardcoat solutions Epoxy over substrate. As a first coat over bare concrete, pull resin as thin as possible while still wetting out concrete and uniformly covering surface. This allows trapped air to escape more easily. To apply in a single coat over an Industrial Epoxy system, pull at about 200 SF per gallon.

6. Using a 3/8" non-shedding phenolic (plastic) core paint roller, roll coating forwards and backwards.

7. Lastly, back roll in the opposite direction as step 6.

8. Apply second coat by repeating steps 1-7 the within 12 hours. Failure to recoat during this window may result in fish eyes and delamination. Always sand floor after 12 hours before recoat

## PACKAGING

### 3 GALLON KITS

PART A	2 GAL
PART B	1 GAL

### IN RAW FORM @ 77°

PART A	ASTMD445 2800-4900
PART B	5 GAL





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### CLEAN UP

100% Solids Epoxy, while in an un-reacted state, may be cleaned up with hot water and degreaser. Isopropyl alcohol or acetone may be needed once the resin begins hardening. Lastly, a strong solvent like methylene chloride may be required if resin is nearly set up.

### SPECIAL NOTE

ALL Epoxies manufactured by HARDCOAT SOLUTIONS are NOT UV stable and can and WILL amber and discolor when exposed to UV light.

### MIXING

The ratio of 100% Solids Epoxy is 2 to 1. That is, two parts A (resin) to one part B (hardener). Mix the following with a drill and mixing paddle.

Note: If using a drill mixer, use a low speed (not to exceed 300 rpm) to prevent air entrapment.

1. Premix Part A for 30-45 seconds.

2. Add Part B and mix for another 60-90 seconds.

3. E2U Epoxy is designed to be immediately poured on the floor. Leaving mixed product in the container will greatly reduce pot life. Once poured out on the floor, 20+ minutes of work time can be expected under optimal conditions.

### CHIP/SILICA SAND BROADCAST INSTRUCTIONS

#### Chip Broadcast

1. Following Step 6 above. Broadcast Color Chips/Micro Chips (at 16 lbs. per 100 sq. ft.) by tossing them into the air and allowing them to gently rain down into the wet resin.

2. Allow to cure. Then scrape the basecoat with a drywall scraper in all directions. Vacuum small pieces and dust. Silica Sand Broadcast

3. Following Step 6 above, gently throw the silica sand up into the air, allowing it to fall without lumping in one spot or moving the resin. Do this until the floor is totally saturated with the silica sand and the resin will not accept any more. This generally requires 1/2 to 3/4 lbs. per sq. ft.. Allow to dry for 6-8 hours.

4. Sweep floor and stone any high spots.

5. Following either method, apply seal coat of E2U Low Odor Polyaspartic at approx. 80 - 170. ft. per gallon. The coverage per gallon will depend GREATLY on the type of broadcast you applied. Contact E2U Tech Support for assistance.

#### WARNING! SLIP AND FALL PRECAUTIONS

OSHA and the American Disabilities Act (ADA) have now set enforceable standards for slipresistance on pedestrian surfaces. The current coefficient of friction required by ADA is .6 on level surfaces and .8 on ramps. hardcoat solutions recommends the use of angular slip-resistant aggregate in all coatings or flooring systems that may be exposed to wet, oily or greasy conditions. It is the contractor and end users' responsibility to provide a flooring system that meets current safety standards. hardcoat solutions or its sales agents will not be responsible for injury incurred in a slip and fall accident.

#### Handling Precautions

Use only with adequate ventilation. Appropriate cartridge-type respirator must be used during application in confined areas. Avoid contact with skin. Some individuals may be allergic to epoxy resin. Protective gloves and clothing are recommended.

#### WARRANTY

hardcoat solutions products are warranted for one year after date of purchase. Please refer to the Limited Material warranty for additional clarification.



**MADE IN USA**