



# Pow-R Shield® EP 10-000

## Universal High Build Epoxy Resin System

### Kit Components

#### STORAGE/SHELF LIFE:

Materials should be stored in original un-opened containers indoors between 65°F (18°C) and 90°F (32°C) and at or below 50% RH. Shelf Life for Un-opened containers 1 year from date of manufacture.

#### PACKAGING KITS/ PART NUMBERS:

Volume Mix Ratio: 2A: 1B: .25C

**POW-R SHIELD® EP 10-000 Clear Gloss**  
Primer 3.00 gallons  
EP 10-000-A/3.5SF,  
EP 10-000CR-B/1

**POW-R SHIELD® EP 10-000 Pigmented**  
Gloss Primer and CR  
Coating 3.25 gallons  
EP 10-000-A/3.5SF,  
EP 10-000CR-B/1,  
UCP-#### /Q

**POW-R SHIELD® EP 10-000 Pigmented**  
Gloss Economical HB Coating 3.25 gallons  
EP 10-000-A/3.5SF,  
EP 10-000EC-B/1,  
UCP-#### /Q

**POW-R SHIELD® EP 10-000 Pigmented**  
Gloss General Purpose HB Coating 3.25  
gallons  
EP 10-000-A/3.5SF,  
EP 10-000GP-B/1,  
UCP-#### /Q

**POW-R SHIELD® EP 10-000 Clear Gloss**  
Reduced Yellowing RY Coating 3.00 gallons  
EP 10-000-A/3.5SF,  
EP 10-000RY-B/1

**POW-R SHIELD® EP 10-000 Clear Gloss Fast**  
Set FS Coating 3.00 gallons  
EP 10-000-A/3.5SF,  
EP 10-000FS-B/1

**POW-R SHIELD® EP 10-000 Clear Gloss**  
Light Stable LS Coating 3.00 gallons  
EP 10-000-A/5SF,  
EP 10-000LS-B/1

#### OPTIONS:

**Color Pack:** Low VOC Color packs designated as UCP-#### /Q can be used with **POW-R SHIELD® EP 10-000**. Many standard and custom colors are available; please refer to the price list for available colors. It is important to have a color consistent floor in a similar color before application of **POW-R SHIELD® EP 10-000** or multiple coats may be required. Some deep base colors may require multiple coats or double color pack to obtain full hide.

**Traction:** GB-35 glass beads or other suitable angular aggregate can be incorporated with **POW-R SHIELD® EP 10-000** to impart improved traction in slip hazard areas.

#### LIMITATIONS:

**Contamination and surface defects (fisheyes):** If contaminants of oils, silicones, mold release agents and/or others are present, **POW-R SHIELD® EP 10-000** may fisheye or crawl away from the surface. Surface contaminants should be removed with a suitable detergent prior to application. Solvent cleaning of silicone contaminants may make the situation worse; please contact the technical service for additional recommendations. **POW-R SHIELD® EP 10-000** May amber over time from UV exposure. Top coat with an **POW-R SHIELD® UR 80-150** aliphatic urethane to improve UV resistance.

**POW-R SHIELD® EP 10-000** is a two component "Universal High Build" 100% solids epoxy resin supplied as a clear or pigmented coating. **POW-R SHIELD® EP 10-000** is supplied with various curing agents to meet the needs of use from general purpose, chemical resistant, and reduced yellowing. This product produces a Gloss finish.



#### APPLICATION:

**MIXING:** Premix all components at slow speed prior to mixing together. Use a Jiffy® ES mix blade attach to a slow speed drill (using a paint stick to mix is not adequate). Mix only enough material at one time not to exceed the pot life. Note: Once this materials is opened and mixed it can't be resealed for later use.

**COLORS:** Only use POW-R SHIELD® Universal Color Packs UCP-####. The color pack **should** be added last to the mixed coating POW-R SHIELD® EP 10-000.

**MIX:** Mix all components together for 2-3 minutes. Thin only to max VOC limit of 250 g/l with xylene or other suitable solvent.

**APPLY** POW-R SHIELD® EP 10-000 : at a rate of 8-25 mils to the floor surface using a notched squeegee or application tray. Back roll the wet coating using a ¼ inch nap mohair roller. Care should be taken to overlap and cross lap, but not over roll the coating introducing air to the surface.

**SPREADING RATE:** When POW-R SHIELD® EP 10-000 is applied as a primer, surface irregularities and porosity in the concrete may affect coverage rate. Be sure to plan accordingly as there may be a need for extra material to provide proper coverage. Material applied too heavy may blister or can be soft during curing. Too little material may produce a non-uniform look. The best practice is to measure and grid the floor to be sure of proper application rate.

**CURING (DRYING):** Allow the coating to cure (dry) for a minimum 24 hours after application at 75°F (24°C) and 50% RH before opening the floor to light traffic, allow more time for low temperatures and higher humidity or for heavier traffic. Full coating properties may take up to 7 days to develop.

**TECHNICAL SUPPORT:** For application questions, please contact Access-Able Technologies, Inc. for technical support.

**DISPOSAL:** Dispose in accordance with federal, state, and local regulations.

#### USES

Use as a primer, build coat, broad casting resin, toweling resin and top coat just by selecting and mixing with the correct curing agent (**EP 10-000\*\*-B**). Suited for concrete applications where a universal epoxy coating is desired for use and installation in industrial work areas.

#### ADVANTAGES

- Applicator can select the proper curing agent to meet the needs of the final project
- No to Low Odor
- High build application
- Excellent impact and abrasion resistance
- Seals concrete, protecting against dirt and spills
- Resists staining and major chemical spills of cleaning and industrial chemicals.
- Complies with VOC regulations for Industrial Maintenance Coatings in the OTC and CA\*. (\*excluding SCAQMD when thinned to max)

#### MATERIAL PROPERTIES\*:

Properties	Test Method	Results
Flash Point	ASTM D3278	≥215 °F (102° C)
Volume Solids (mixed)	ASTM D2369	100 %
Mixed Viscosity	ASTM D2196	400-700 cPs
Dry Time	ASTM D5895	Tack Free 4-6 hr Dry 6-10 hr Full Cure 7 days
VOC-Volatile Organic Compound	ASTM D3960	0 g/l clear & pigmented ≤250 g/l with max thinning

#### CURED PROPERTIES\*:

Properties	Test Method	Results
Abrasion Resistance Tabor CS-17, mg loss/1000 cycles/1000g mass	ASTM D4060	75 mg
Coefficient if Friction-COF James Test	ASTM D2047	0.55 0.65(w/NS-36)
Tensile Strength	ASTM D2370	12,000 psi
Adhesion to Concrete	ASTM D4541	350 psi concrete failure
Impact	ASTM D2794	40 in.lbs Direct & Reverse
Hardness (Pencil)	ASTM D3363	2H
Dry Film Thickness	at 15 mils WFT	15 mils

\*Properties and results are based on laboratory testing at 72°F (22°C) %50 RH, theoretical calculations and estimates. Typical properties, as stated, are to be considered as representative of current production and should not be treated as specifications.



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### RECOMMENDED

#### APPLICATION

7-10 mils as a primer with additional xylene solvent.  
15-20 mils as a coating.

#### Primer Applications:

Up to 1 quart of xylene solvent can be added per 3.13 gallons of resin (total 3.38 gallons) for a maximum VOC=100 g/l

Up to 1 gallon of xylene solvent can be added per 3.13 gallons of resin (total 4.13 gallons) for a maximum VOC=250 g/l

160 sq. ft. per gallon at 10 mils WFT.  
3.9 sq. m. per liter at 254 microns.  
One kit (3.00 gallons) of mixed POW-R SHIELD® EP 10-000 (clear) will cover 680 sq. ft. (63.2 sq. m) at 7-10 mils WFT (178-254 microns).

One kit (3.25 gallons) of mixed POW-R SHIELD® EP 10-000 (pigmented) will cover 715 sq. ft. (66.4 sq. m) at 7-10 mils WFT (178-254 microns).

#### Coating Applications:

80 sq. ft. per gallon at 20 mils WFT.  
1.9 sq. m. per liter at 508 microns.  
One kit (3.00 gallons) of mixed POW-R SHIELD® EP 10-000 (clear) will cover 320 sq. ft. (29.7 sq. m) at 15-20 mils WFT (381-508 microns).  
One kit (3.25 gallons) of mixed POW-R SHIELD® EP 10-000 (pigmented) will cover 335 sq. ft. (31.1 sq. m) at 15-20 mils WFT (381-508 microns).

#### CURING AGENT USAGE:

EP 10-000CR-B is a **Chemical Resistance CR** curing agent and offers superior water resistance and is intended for use as a primer and CR topcoat. **Epoxy 10-000CR-B** may amber over time.

EP 10-000EC-B is an economical **High Build HB** curing agent and offers basic chemical resistance. **EP 10-000EC-B** can be used for primers and pigmented topcoat applications.

EP 10-000GP-B is a general purpose **High Build HB** curing agent and offers limited chemical resistance with good amber resistance. **EP 10-000GP-B** is not intended for primers or direct to concrete applications.

EP 10-000RY-B is a **Reduced Yellowing RY** curing agent and can be used for clear coats. **EP 10-000GP-B** offers good chemical resistance.

EP 10-000FS-B is a general purpose **Fast Setting FS** curing agent and offers limited chemical resistance with good amber resistance. **EP 10-000FS-B** is not intended for primers or direct to concrete applications.

EP 10-000LS-B is a **Light Stable LS** curing agent offers excellent chemical resistance, excellent amber resistance and superior water spot resistance

### CHEMICAL RESISTANCE\*:

EP 10-000CR Clear	1 Day	7 Days
<b>ACIDS, INORGANIC</b>		
10% Hydrochloric	E	E
30% Hydrochloric	F	P
10% Nitric	E	E
50% Phosphoric	G	F
37% Sulfuric	E	E
<b>ACIDS, ORGANIC</b>		
10% Acetic	G	F
10% Citric	E	G
Oleic	E	E
<b>ALKALIES</b>		
10% Ammonium Hydroxide	E	E
50% Sodium Hydroxide	E	E
<b>SOLVENTS</b>		
Ethylene Glycol	G	G
Isopropanol	E	E
Methanol	P	P
d-Limonene	E	E
Jet Fuel	E	E
Gasoline	G	F
Mineral Spirits	E	E
Xylene	E	G
Methylene Chloride	P	P
MEK	P	P
PMA	G	G
<b>MISCELLANEOUS</b>		
20% Ammonium Nitrate	E	E
Brake Fluid	E	E
Bleach	E	E
Motor Oil	E	E
Skydrol®500B	E	E
Skydrol®LD4	E	E
20% Sodium Chloride	E	E
10% TSP	E	E

\*Based on spot testing of the clear coating after 14 days of cure. Pigmented versions may see reduced chemical resistance and staining.

#### Legend:

- E- Excellent (Not Effected) - Recommended
- G-Good (Limited Negative Effect) - Short Term Exposure
- F-Fair (Moderate Negative Effect) - Not recommended
- P-Poor (Unsatisfactory) - No Resistance to Exposure

### INSPECTION AND APPLICATION:

**Caution! Follow all precautions and instructions prior to installation.**

**CHECK THE SUBSTRATE CONCRETE:** Substrate concrete must be free of curing membrane, silicate surface hardener, paint, or sealer and be structurally sound. If you suspect the concrete has been treated or sealed, prepare substrate for complete removal of treatment.

**CHECK FOR MOISTURE:** Concrete must be dry before applications of this floor coating. Test concrete for moisture vapor transmission (MVT) using calcium chloride testing ASTM F1869 or in-situ RH testing ASTM F2170. Do not exceed a maximum result of 3 pounds per 1000 sq. ft. over 24 hours or a value above 70% RH (internal concrete humidity).

**EXCLUSION:** Testing for MVT is critical, however it does not guarantee against future problems. If there is no vapor barrier or the vapor barrier is damaged, this can contribute to floor failure. Contamination to concrete from oils, chemicals, excessive salts or Alkali Silica Reaction (ASR) may also contribute to floor failure.

**CHECK THE TEMPERATURE AND HUMIDITY:** During the application and cure of the coating, the substrate temperature, material temperature and room conditions should be maintained between 65°F (18°C) and 90°F (32°C). Relative Humidity (RH) should be limited to 30-80%. DO NOT apply coatings unless the floor temperature is more than five degree over the dew point.

### APPLICATION EQUIPMENT:

- Protective equipment and clothing as called for in the SDS.
- Jiffy® Mixer Blade model ES.
- Clean container to mix materials in.
- Low speed high torque drill motor.
- High quality short nap roller covers ¼ inch mohair.
- Application Squeegee or application trays.
- Disc sanding equipment with 80-100 mesh sanding screens.
- Vacuum equipment.

### PREPARATION:

Surface dirt, grease, oil and contaminants must be removed by detergent scrubbing and rinsing with clean (clear) water.

**Acid Etch (bare concrete):** (Not recommended for high build coatings) Successive acid etch treatments may be required to obtain proper adhesion to concrete. Rinse with clean water and neutralize with TSP solution.

**Shot Blasting (bare concrete):** Is a preferred method of surface preparation. Modify blaster to minimize too heavy of a surface profile and over-lap marks.

**Diamond Grind (bare concrete):** Results of grinding may vary depending on technique and the hardness of the concrete.

**JOINTS:** All non moving joints (control joints) can be filled with a semi-rigid joint compound such as **Pow-R Shield® Joint Sealants**. Construction joints may need to be re-built and re-cut and then filled with semi-rigid joint filler. Isolation or expansion joints must be filled with a flexible material designed for expansion and should not be coated over.

**RECOAT: POW-R SHIELD® EP 10-000** can be coated with other **ATI** epoxies and urethanes or may be used as a topcoat over existing (sound) **ATI** epoxy coatings. The prior cured coating surface must be sanded with 100 grit sand paper or sanding screen installed on a swing-type floor buffer. Sand to a uniform dulled surface. Remove all sanding debris with a vacuum and damp mop. Scrub with detergent and rinse with clean water. Surface must be dry before coating.

**BARE CONCRETE APPLICATION: POW-R SHIELD® EP 10-000 MUST BE APPLIED OVER AN EPOXY PRIMED SURFACE.** Use **POW-R SHIELD® EP 10-000CR** as the epoxy primer (See appropriate product data sheet for application instructions). Other **POW-R SHIELD®** specialty primers may also be used depending on concrete condition.

**READ SAFETY DATA SHEET (SDS) FOR SAFETY AND PRECAUTIONS. USE PRODUCT AS DIRECTED. FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.**

### MAINTENANCE GUIDELINES:

Allow floor coating to cure at least one week before cleaning by mechanical means (IE: sweeper, scrubber, disc buffer).

**CARE:** Increased life of the floor will be seen with proper maintenance and will help maintain a fresh appearance of your new ACCESS-ABLE TECHNOLOGIES, INC. floor. Regularly sweep your new floor as ground in dirt and grit can quickly dull the finish thus decreasing the life of the coating. Spills should be removed quickly as certain chemicals may stain and can permanently damage the finish.

Only soft nylon brushes or white pads should be used on your new floor coating. Premature loss of gloss can be caused by hard abrasive bristle Polypropylene (Tyrex®) brushes.

Use only neutral non butyl cleaning detergents on your floor coating. Test any new cleaning product on a non-conspicuous area prior to using to avoid damage to the floor.

**CAUTION:** Heavy objects dragged across the surface will scratch all floor coatings. Avoid gouging or scratching the surface.

Pointed items or heavy items dropped on the floor may cause chipping or concrete pop out damage. Plasticizer migration from rubber tires can permanently stain the floor coating. If a rubber tire is planned to set on the floor for a long period of time, place a piece of acrylic sheet between the tire and the floor to prevent tire staining. Rubber burns from quick stops and starts from lift trucks can heat the coating to its softening point causing permanent damage and marking.

**REPAIR:** Repair gouges, chip outs, and scratches as soon as possible to prevent moisture and chemical under cutting and permanent damage to the floor coating.



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## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY:

THE SELLER warrants that goods shipped will conform to seller's written specifications, however because use/installation of these products are beyond our control, THE SELLER, accepts no responsibility or liability for any consequential damages from failure in performance in cases where the products are found not to conform to specification or have failed due to other means. Liability is limited to the refund of purchase price or supply of replacement product (necessary for repair area only) proved to be defective.

The term of limited warranty for unopened products shall be 1 year from date of purchase for non-ESD materials stored under proper conditions of 65-90 degs F protected from the elements (Stored indoors).

Installation of all products purchased must be installed by an approved profession installer. If surface defects, incomplete cure or other issues develop during installation, the installation should be stopped until what may be causing the installation issues can be determined to limit further defect or damage.

Any modification to any component not outlined in the PRODUCT DATA SHEET nullifies any warranty or liability. IE: improper mixing ratio, or mixing with other manufacturers products. Proper record of field conditions must be maintained by the installer (IE: surface and atmospheric conditions, usage rates, and lot numbers of product installed locations and dates).

THE SELLER reserves the right of inspection of any installed product, installation, maintenance records, sales records and may conduct testing as may be reasonably required to determine cause. Warranty is only in force for products or materials that have been paid in full and received by THE SELLER.

THE SELLER disclaims liability for incidental and consequential damages resulting from a breach of any warranty, expressed or implied including damages caused by, but not limited to, the following:

- Acts of GOD including fire, flood and warfare.
- Building or structural weakness including settling, casualty, or accident.
- Exposure to destructive chemicals not specified in the proposal or processes.
- Gouging of the floor coating surface by not providing reasonable protection and maintenance or any improper use of the floor.
- Facilities equipment and machinery being installed after floor system was applied.
- Business interruption.
- Premature use of floor without proper cure period.
- Damages by acts of others to property and personal.

Moisture Vapor Transmission (MVT) and ASR (Alkali Silica Reaction) Disclaimer and Exclusion: Although rare, some floors at or below grade level are sometimes subjected to saturation by moisture from beneath the concrete floor slab. This moisture can travel through the concrete and collect between floor toppings creating the potential for delaminating from hydrostatic pressure and or ASR. Conditions contributing to this include heavy rainfall, broken pipes, excess hydration within fresh concrete, and other factors of defective and old concrete. These factors are difficult, if not impossible to predict. THE SELLER recommends testing for MVT and/or the presence of ASR in the concrete substrate prior to applying any polymer floor topping. The recommended test method for MVT utilizes calcium chloride test kits and in situ concrete humidity. ASR can be predicted by a higher than normal pH within the concrete. If high pH should be detected, it is recommended have the concrete tested by a professional lab for ASR. If and when delamination of the floor occurs because of a moisture condition that exists beneath or in the concrete slab or failure of the concrete due to ASR, this Limited Warranty does not extend to such delaminating or topping failure. This writing constitutes the sole and only agreement of warranty relating to THE SELLER's products. Any prior agreements, promises or representations by THE SELLER or others not expressly set forth in a written agreement, are not enforceable or in effect.

**THIS WARRANTY IS IN PLACE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND OF ANY OTHER OBLIGATIONS OF THE SELLER.**



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