Pow-R Shield® PU 95-000

Flexible High Solids Low Surface Energy Polyurea Industrial Maintenance Topcoat

POW-R® PU 95-000 is an Industrial Maintenance Coating based on a High Solids two component polyurea resin intended to be applied over an epoxy primer. Its tough pourable rubber like compound imparts very high abrasion resistance with the added benefit of low surface energy to promote a non-stick surface. Can be used to protect metal from abrasion and impart a non-stick surface, repair worn rubber or urethane parts, making flexible fixtures and making vibration and isolation pads.

KIT COMPONENTS

STORAGE: 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: Un-opened containers 1 year from date of manufacture.

PU 95-000L Liquid
Volume Mix Ratio: 2.85A:1B Vol.
Weight Mix Ratio: 2.5A:1B Wt.

PU 95-000P Putty
Volume Mix Ratio: 2.85A:1B Vol.
Weight Mix Ratio: 2.5A:1B Wt.

PACKAGING KITS/ PART NUMBERS:

Small Kit—2 pounds (.23gallons)

POW-R® PU 95-000P Black
POW-R® PU 95-000P-(Black)-A/QSF,
POW-R® PU 95-000-B/280gBAG

Medium Kit—5 pounds (.54 gallons)

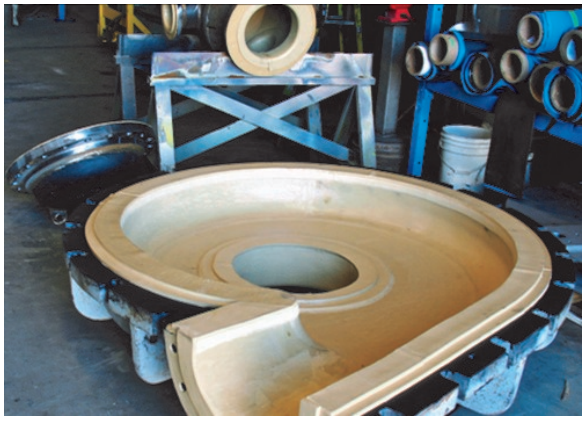
POW-R® PU 95-000P Black
POW-R® PU 95-000P-(Black)-A/1SF,
POW-R® PU 95-000-B/650BAG

Large Kit—9 pounds (gallons)

POW-R® PU 95-000 Black
.95gallons
POW-R® PU 95-000P-(Black)A/1,
POW-R® PU 95-000-B/Q

OPTIONS:
Black is the standard color. Other colors available upon request.

LIMITATIONS:
Contamination and surface defects (fisheyes): If contaminates of oils, silicones, mold release agents and/or others are present, **POW-R® PU 95-000** may fisheye or crawl away from the surface. Surface contaminates should be removes with a suitable detergent prior to application. Solvent cleaning of silicone contaminates may make the situation worse; please contact the lab for additional recommendations.



APPLICATION:

MIXING: Premix all components by hand prior to mixing together. For small kits hand mix very well and apply quickly. Use a Jiffy® ES mix blade attach to a slow speed drill (using a paint stick to mix is not adequate) for Medium to Large kits. Mix only enough material at one time not to exceed the pot life. Note: Once this materials is opened and mixed it CAN NOT be resealed for later use.
MIX: Mix all components together for 1 minutes. DO NOT THIN!
APPLY Pow-R® PU 95-000: at a rate of 20-50 mils (32-50 sq. ft. per gallon) to the surface by brush and 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 into the surface.
SPREADING RATE: Material is heavy bodied and may have inconsistent thickness when applied. Applied too heavy may blister or gas and can be soft during curing. Too little material may produce a non-uniform look. The best practice is to measure surface to be sure of proper application rate and check with a wet film gage.
CURING (DRYING): Allow the coating to cure (dry) for a minimum 8-24 hours after application at 75°F (24°C) and 50% RH before opening to service. Allow more time for low temperatures and low humidity. Full coating properties may take up to 7 days to develop.

TECHNICAL SUPPORT

For application questions, please contact your ATI salesman or technical service.

DISPOSAL

Dispose in accordance with federal, state, and local regulations.

USES

Suited for metal, fiberglass, and concrete surfaces found in industrial productions areas to protect from heavy abrasion. Suitable for slurry system pipe and pump liners. Casting of wear parts, repairing rubber and urethane conveyers, making of flexible fixtures, making vibration and isolation pads, and coating pumps and impellers. Useful in loader buckets and dump truck beds to aid in full removal of slurry and sludge to increase production.

ADVANTAGES

- Low Surface Energy coating that offers a non-stick surface.
- Resists many industrial chemicals for minimal contact.
- Tough pourable system for casting parts. Fast cure for fast return to Service. Designed to withstand heavy industrial use and abrasion.

- Complies with VOC regulations for Industrial Maintenance Coatings in the OTC & CA

MATERIAL PROPERTIES*:

Properties	Test Method	Results
Flash Point	ASTM D3278	NA °F (°C)
Volume Solids (mixed)	ASTM D2369	>95%
Mixed Viscosity	ASTM D2196	10,000 cPs Liquid 45,000 cPs Putty
Pot Life/Gel time	ASTM D2471@ RT	30 mins Liquid 20mins Putty
Dry Time	ASTM D5895	Tack Free 6hr Dry 8 -12 hr Full Cure 7-14 days
VOC-Volatile Organic Compound	ASTM D3960	<10 g/l

CURED PROPERTIES*:

Properties	Test Method	Results
Abrasion Resistance Tabor CS-10, mg loss/1000 cycles/1000g mass	ASTM D4060	20 mg
Shore Hardness	ASTM D2240	85-95 A
Tensile Strength	ASTM D412	3000 psi
Elongation	ASTM D412	300%
Impact	ASTM D2794	160 in.lbs Direct & Reverse
Tear Resistance	ASTM D624	350 pli
Dry Film Thickness	at 30 mils WFT	30 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.

Pow-R Shield® PU 95-000

Flexible High Solids Low Surface Energy Polyurea Industrial Maintenance Topcoat

RECOMMENDED APPLICATION

Coverage will vary based on thickness and irregularity of surface. Recommended thickness has to be based on the degree of abrasion and is user specific.

80 sq. ft. per gallon at 20 mils WFT. 1.9 sq. m, per liter at 508 microns.

32 sq. ft. per gallon at 50 mils WFT. .78 sq. m, per liter at 1270 microns.

Small kit (.23gallons) of mixed POW-R® PU 95-000P will cover 7 sq. ft. (.65 sq. m) at 50 mils WFT (1270 microns).

Medium kit (.54gallons) of mixed POW-R® PU 95-000P will cover 17.7sq. ft. (1.64 sq. m) at 50 mils WFT (1270 microns).

Large kit (.95gallons) of mixed POW-R® PU 95-000P will cover 32 sq. ft. (2.97 sq. m) at 50 mils WFT (1270 microns).

CHEMICAL RESISTANCE*:

POW-R® PU 95-000	1 Day	7 Days
ACIDS, INORGANIC		
10% Hydrochloric	G	G
30% Hydrochloric	G	G
10% Nitric	F	F
50% Phosphoric	F	F
37% Sulfuric	P	P
ACIDS, ORGANIC		
10% Acetic	F	F
10 % Citric	G	G
Oleic	G	G
ALKALIES		
10% Ammonium Hydroxide	E	E
50% Sodium Hydroxide	E	E
SOLVENTS		
Ethylene Glycol	G	G
Isopropanol	G	G
Methanol	P	P
d-Limonene	E	E
Jet Fuel	F	F
Gasoline	F	P
Mineral Spirits	E	E
Xylene	F	P
Methylene Chloride	P	P
MEK	P	P
PMA	G	G
MISCELLANEOUS		
20% Ammonium Nitrate	E	E
Brake Fluid	F	F
Bleach	E	E
Motor Oil	E	E
Skydrol®500B	F	F
Skydrol®LD4	F	F
20% Sodium Chloride	E	E
Cutting Oil	F	F

*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 METAL: Bare metal must have a NACE near white metal blast profile with a 2-3 mils blast profile. If over coating, the surface should be free of lose paint and be structurally sound. If you suspect the surface not to be sound, remove any old coating or sealer with a wire brush or by sand blasting.

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 below 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 to 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 contaminates must be removed by detergent scrubbing and rinsing with clean (clear) water.

.

RECOAT: POW-R® PU 95-000 can be recoated with additional coats only if sanded and within a 24 hour recoat window or may be used as a topcoat over existing (sound) ATI epoxy coatings. The prior cured coating surface must be sanded with 80-100 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 METAL APPLICATION: POW-R® PU 95-000 MUST BE APPLIED OVER AN EPOXY METAL PRIMER. Use Pow-R® EPOXY 30-250 as the epoxy primer

BARE CONCRETE APPLICATION: POW-R® PU 95-000 MUST BE APPLIED OVER AN EPOXY PRIMER (OR SURFACE). Use Pow-R® EPOXY 10-000CR as the epoxy primer (See appropriate product data sheet for application instructions).

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 (Tynex®) bushes.

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.

Pow-R Shield® PU 95-000

Flexible High Solids Low Surface Energy Polyurea Industrial Maintenance Topcoat

CONDITIONS OF SALE AND LIMITATION OF WARRENTY 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 WARRENTIES, EPRESSED OR IMPLIED, INCLUDING WARRENTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND OF ANY OTHER OBLIGATIONS OF THE SELLER.

Access-Able Technologies, Inc.
360 Old Sanford Oviedo Road
Winter Springs, FL 32708
800-572-4894 (tel)

For More Information:
sales@accessabletech.com
www.accessabletech.com