

**TECHNICAL DATA**

# HPU

**HIGH PERFORMANCE URETHANE**

**PRODUCT DESCRIPTION:** HPU is a two component polyester/aliphatic polyurethane coating that exhibits excellent characteristics for abrasion resistance, chemical resistance, flexibility, weathering, and UV stability. This product meets the VOC requirements for the newly enacted VOC laws of New York, Pennsylvania, New Jersey, and other states as an industrial maintenance coating.

Recommended for auto service centers, warehouses, computer rooms, laboratories, aircraft hangers, cafeterias, exterior tanks, indoor or outdoor service and chemical exposures areas.

**SOLIDS BY WEIGHT:** Mixed= 73% (colors); 64% (clear) (+/- 2%)

**SOLIDS BY VOLUME:**

Mixed= 70% (colors); 60% (clear) (+/- 2%)

**VOLATILE ORGANIC CONTENT:**

VOC content is less than 335 g/l (mixed)

**COLORS AVAILABLE:** White, off white, light gray, medium gray, tile red, beige, and clear.

**COVERAGE PER GALLON KIT (colors):**

320 to 500 square feet @ 3-5 mils wet thickness

**PACKAGING INFORMATION:**

3 gallon and 15 gallon kits. 3 gal kit = 2 gallons part A (weight varies by color) and 1 gallon part B (8.5#) (weights and volumes approximate)

**MIX RATIO:** 2 parts A to 1 part B by volume (approximate)

**FINISH CHARACTERISTICS:**

High-gloss (>70 at 60 degrees @ glossmeter)

**SHELF LIFE:** 1 year in unopened containers

**ABRASION RESISTANCE:** Taber abrasor CS-17 calibrase wheel with 1000 gram total load and 500 cycles= 22.0 mg loss

**IMPACT RESISTANCE:**

Gardner Impact, direct & reverse=160 in lb (passed)

**FLEXIBILITY:** No cracks on a 1/8" mandrel

**ADHESION:** 350 psi @ elcometer (concrete failure, no delamination)

**VISCOSITY:** Mixed= 200-600 cps (typical)

**DOT CLASSIFICATIONS:**

Part A "FLAMMABLE LIQUID N.O.S., 3, UN1993, PGIII"

Part B "FLAMMABLE LIQUID N.O.S., 3, UN1993, PGIII"

**HARDNESS:** Shore D= 62

**FLEXIBILITY:** S=No cracks on a 1/8" mandrel

**CURE SCHEDULE:** (70°F) (70% relative humidity)

Pot life – (1 1/2 gallon volume).....2-4 hours  
 Tack free (dry to touch)..... 3-5 hours  
 recoat or topcoat..... 5-9 hours  
 light foot traffic.....14-24 hours  
 Full cure (heavy traffic) ..... 3 to 5 days

**APPLICATION TEMPERATURE:**

50-90 degrees F with relative humidity below 50-90%

**CHEMICAL RESISTANCE:**

REAGENT	RATING
acetic acid 5%	B
xylene	D
mek	A
methyl alcohol	B
gasoline	D
10% sodium hydroxide	E
50% sodium hydroxide	D
10% sulfuric	D
10% hydrochloric acid	C
20% nitric acid	B
ethylene glycol	D

**Rating key:**

A - not recommended      B - 2 hour term splash spill  
 C - 8 hour term splash spill      D - 72 hour immersion  
 E - long term immersion.

NOTE: extensive chemical resistance information is available through your sales representative.

**PRIMER:** Apply a suitable basecoat. Ask your Spartan Epoxies Sales Rep.

**TOPCOAT:** None Recommended

**LIMITATIONS:**

Colors or clarity for clear may be affected by high humidity, low temperatures, or chemical exposure.

For best results use a high quality 3/8" nap roller.

Slab on grade requires moisture barrier.

Substrate temperature must be 5°F above dew point.

All new concrete must be cured for at least 30 days.

Light or bright colors (white, safety yellow, etc.) may require multiple coats or a suitable color coordinated primer to achieve a satisfactory hide.

Colors may vary from batch to batch, therefore, use only product from the same batch for an entire job.

Tire contact may cause discoloration or staining.

Physical properties are typical values and not specifications.

See reverse side for application instructions.

See reverse side for limitations of our liability and warranty.

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## MIXING AND APPLICATION INSTRUCTIONS (HPU)

**1) PRODUCT STORAGE:** Store product in an area as to bring the material to normal room temperature before using. Continuous storage should be between 60 and 90 degrees F.

**2) SURFACE PREPARATION:** Surface preparation will vary according to the type of complete system to be applied. For a one or two coat thin build system (3-10 mils dry) we recommend either mechanical scarification or acid etching until a suitable profile is achieved. For a complete system build higher than 10 mils dry, we recommend a fine brush blast (shot blast). All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate. A test should be made to determine that the concrete is dry; this can be done by placing a 4'X4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate is dry enough to start coating. The plastic sheet testing is also a good method to determine if any hydrostatic pressure problems exist that may later cause disbonding.

**3) PRODUCT MIXING:** This product has a two to one mix ratio by volume- merely mix two gallons of part A with 1 gallon part B. After the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. Avoid whipping air into the coating. Improper mixing may result in product failure.

**4) PRODUCT APPLICATION:** The mixed material can be applied by brush or roller. Maintain temperatures within the recommended ranges during the application and curing process. Properly prime the substrate. It is best to maintain a wet edge to avoid roller marks. Direct sun-light or high temperatures may cause visible roller marking during application. Too thick of an application may result in product failure. Exposure to certain types of lighting such as sodium vapor lights may cause the product to discolor. Applications with relative humidity higher than 90% and/or poor air circulation may cause improper cure and surface tackiness.

**5) RECOAT OR TOPCOATING:** Multiple coats of this product are acceptable. If you opt to recoat this product, you must first be sure that all of the solvents have evaporated from the coating during the curing process. The information on the front side are reliable guidelines to follow. However, it is best to test the coating before recoating or topcoating. This can be done by pressing on the coating with your thumb to verify that no fingerprint impression is left. If no impression is created, then the recoat can be started. Always remember that colder temperatures will require more cure time for the product before recoating can commence. Before recoating or topcoating, check the coating to insure no contaminants exist. If a blush or contaminants are present on a previous coat, remove with a standard detergent cleaner. When recoating this product with subsequent coats of the urethane, it is advisable to apply the recoat before 24 hours passes. Also, it is advisable to degloss the previous coat to insure a trouble free bond.

**6) CLEANUP:** Use ketone solvents

**7) FLOOR CLEANING:** Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.

**8) RESTRICTIONS:** Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured (see technical data under full cure). It is best to let the floor remain dry for the full cure cycle. Dependent on actual complete system application, surface may be slippery, especially when wet or contaminated; keep surface clean and dry.

**NOTICE TO BUYER: DISCLAIMER OF WARRANTIES AND LIMITATIONS ON OUR LIABILITY**

We warrant that our product is manufactured to the specifications as stated here or in other publications. All other information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, REGARDING SUCH OTHER INFORMATION, THE DATA ON WHICH IT IS BASED, OR THE RESULTS YOU WILL OBTAIN FROM ITS USE. NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, THAT OUR PRODUCT SHALL BE MERCHANTABLE OR THAT OUR PRODUCT SHALL BE FIT FOR ANY PARTICULAR PURPOSE. NO WARRANTY IS MADE THAT THE USE OF SUCH INFORMATION OR OUR PRODUCT WILL NOT INFRINGE UPON ANY PATENT. We shall have no liability for incidental or consequential damages, direct or indirect. Our liability is limited to the net selling price of our product or the replacement of our product, at our option. Acceptance of delivery of our product means that you have accepted the terms of this warranty whether or not purchase orders or other documents state terms that or other documents state terms that vary from this warranty. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products. Any use or application other than recommended herein is the sole responsibility of the user. Uncured epoxy resins, polymers and their curing agents may be ALKALINE, TOXIC or BOTH, depending on the particular system. They may cause ALLERGIC REACTIONS or HYPERSENSITIVITY REACTIONS. BEFORE USING any material, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW ALL PRECAUTIONS TO PREVENT BODILY HARM. COPYRIGHT 01/12/15 SPARTAN EPOXIES LTD.