



# HP Urethane Data Sheet

Part # HPU-CL, HPU-CO

**DESCRIPTION:** Concrete Solutions® HP Urethane is a 2:1, high performance, chemically cured aliphatic polyol urethane coating with superior exterior performance. It has excellent gloss and color retention characteristics with no tendency to yellow in sunlight (exterior exposure) or to darken in interior applications. It has superior abrasion and splash resistance to Alkalies (salts), Acids (nonoxidizing) and skydrol (hydraulic fluid), as well as resistance to oils, JP 4 and JP 5 fuel, diesel oil, light fuel oil, lubricating oils and synthetic lubricating products. When a high performance coating is needed, HP Urethane provides an excellent finish coat when it is used over the proper primer depending on the substrate. HP Urethane can be applied over Concrete Solutions WB Epoxy, Epoxy 200, Epoxy 600, and as a topcoat over the Concrete Solutions Color Flake and Tuff-Grit Flooring Systems. **Do not apply over Concrete Solutions Stamped Concrete Sealer, Sealcoat 1000 or Concrete Colorcoat.** If desired, a special accelerator can be added to the HP Urethane for a faster cure time.

**TYPICAL USES:** High performance, weather-resistant floor coating

**FEATURES & BENEFITS:**

- Long lasting, deep lustrous gloss
- Non-yellowing, detergent resistant
- Excellent chemical resistance
- Weather resistant
- Meets military specification MIL-C-85285A (AS)
- Can be applied by brush, roller or airless sprayer

**CHEMICAL PROPERTIES:**

	Result
Solids by Weight 60% : 70% (pigmented)	
Volatile Organic Compounds	3.5 lbs/gal (420 g/l)
Mix Ratio, parts per volume	2A (resin) : 1B (hardener)
Pot Life @ 77°F (25°C)	1 – 2 hrs (less in hotter temperatures)
Recoat, min / max	8 – 12 hrs / 24 hrs
Dry to Touch @ 77°F (25°C)	4 – 6 hrs
Walk on Time (light foot traffic)	24 hrs
Full Cure	7 days
Coverage Rate per Gallon	300 – 400 sqft @ 3mils WFT, 2mils DFT 450 – 500 sqft over 100% solids epoxy and Metal Fusion
Recommended Application Temperature	≥50°F (10°C)
Color	clear
Shelf Life - unopened containers	24 months (when stored at 50 – 80°F)

**TYPICAL PHYSICAL PROPERTIES:**

	Test	Result
Hardness (Konig) -pendulum	ASTM D-256	127
Impact Resistance (in/lb)	ASTM D-2794	38
Taber Abrasion Resistance (mg of loss/1000 cycles) CS17 Wheel; 1000 grams weight	ASTM D-4060	34
Flexibility	ASTM D-222	passes 1/8 inch
60° Gloss		90-95

**MOISTURE VAPOR TESTING:** All concrete floors not poured over a proper moisture barrier, are subject to possible moisture vapor transmission or hydrostatic pressure problems which can cause a coating system to blister or fail. Before applying a coating system over a concrete floor which is on-grade or below grade, the customer should be informed of this potential problem and given the option to have a qualified moisture testing company perform calcium chloride test to give the proper recommendations.

**SURFACE PREPARATION:** The surface must be clean and sound, free from moisture, oil, dirt, waxes, and any other contaminants that may interfere with bonding. Some methods include shot-blasting, or scrubbing with detergent, acid washing, neutralizing, rinsing and wet/dry vacuuming. If more than one coat of HP Urethane will be applied, the second coat should be applied within a 24 hour period after the first. After 24 hours of curing, the first coat will need to be sanded with 100 grit sandpaper before applying the second coat for proper adhesion. For more information on surface preparation, see the Concrete Solutions Training Manual. Following the proper surface preparation, prime the surface with Epoxy 200 2A:1B or WB Epoxy Clear 4A:1B. The best primer to use will depend on the job application and conditions.

**CONCRETE SOLUTIONS® HP URETHANE (continued):**

**MIXING INSTRUCTIONS:** Mix by volume 2 parts A [resin] to 1 part B [hardener] using a slow speed drill and mixing paddle for 3 – 5 minutes. While mixing, scrape the sides and bottom of the mixing container to achieve a uniform consistency. Mix only the amount of material that can be used in 1 – 2 hour period. When using HP Urethane color version, always mix part A separately before adding part B for the best color uniformity. Do not thin HP Urethane when rolling or spraying. Clean equipment with MEK followed by paint thinner to leave in the sprayer until the next use.

**APPLICATION INSTRUCTIONS:** Apply by brush, roller or airless sprayer at a coverage rate of 300 – 400 sq. ft. per gallon. Use a good quality 1/4" – 3/8" nap roller cover. Rinse the roller with water prior to use and allow to dry to avoid leaving roller hairs behind.

**When using an airless sprayer,** a 15 degree tip with a 10 inch fan should be sufficient. Apply a thin, even coat or coats (one coat, two coats or three coats according to the job requirement). Wait a minimum of 8 – 12 hours, but no longer than 24 hours between coats. After 24 hours, lightly sand the surface with 100 grit sandpaper before re-coating.

**Accelerator** - HP Urethane can be made to dry faster by using Concrete Solutions HP Accelerator. When using the Accelerator, mix 10 – 30 drops of Accelerator in a small amount (1/4 cup) of MEK (Methyl, Ethyl, Ketone) and mix to a uniform consistency. Add the mixture of Accelerator and MEK to the already mixed HP Urethane, then apply as usual. Accelerated HP Urethane can generally be re-coated in 4 – 6 hours.

**NOT RECOMMENDED FOR:** Do not apply over Concrete Solutions Stamped Concrete Sealer, Sealcoat 1000 or Concrete Colorcoat.

**CHEMICAL RESISTANCE:**

**24 HOUR IMMERSION (ASTM D-1308)**

Motor Oil .....	no effect	Skydrol B-4 .....	no effect
Gasoline .....	no effect	Whiskey.....	no effect
Transmission Fluid .....	no effect	25% Hydrochloric Acid.....	no effect
Urine .....	no effect	25% Sulphuric Acid.....	no effect
Blood .....	no effect	50% Sodium Hydroxide .....	no effect
Black Ink .....	no effect	25% Acetic Acid .....	no effect
Mineral Spirits.....	no effect	25% Nitric Acid.....	no effect
Hydraulic Fluid #83282.....	no effect		

**SALT WATER SPLASH TEST**

2000 hrs. .... Passes

**COLOR OPTIONS:** Available in clear and 8 standard colors. Custom colors are also available by special order.

**HOW SUPPLIED:** Available in 1.5 gallon and 3 gallon kits

**SLIP/FALL PRECAUTIONS:** Concrete Solutions recommends using slip resistant granules in all outdoor applications where the HP Urethane will be used as a topcoat sealer and on indoor applications that may be exposed to water, oil or other spills that may cause a slippery environment. Aluminum oxide granules #80 grit or courser may be broadcast into the prime coat to achieve the amount of slip resistance desired. It is the end users responsibility to determine the suitability of a coating for their particular application. Concrete Solutions or its sales people will not be responsible for injury incurred in a slip/fall accident.

**WARNING:** HP Urethane is combustible and should be kept away from open flames. Turn out all pilot lights. Wear the proper breathing mask in areas with poor ventilation. Read Material Safety Data Sheet before using. For professional use only!

**SAFETY PRECAUTIONS: Health Considerations: Consult the Rhino Linings® Safety Data Sheets (SDS)**

Chemical systems require the use of proper safety equipment and procedures. Please follow the Rhino Linings® product SDS and Safety Manual for detailed information and handling guidelines.

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