ULTRA SURFACE HP URETHANE Technical Data Sheet 2/05

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DESCRIPTION: Ultra Surface HP Urethane 2A:1B is a 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, Ultra Surface HP Urethane provides an excellent finish coat. It is available in clear and 10 standard colors. Custom colors can also be made for an additional charge. HP Urethane can be applied over Ultra Surface WB Epoxy, Epoxy 200, Epoxy 600, and as a topcoat over the Ultra Surface Color Flake and Tuff-Grit Flooring Systems. **Do not apply over Ultra Surface Stamped Concrete Sealer, Sealcoat 1000 or Colorcoat 100.** If desired a special accelerator can be added to the Ultra Surface HP Urethane for a faster cure time. Ultra Surface HP Urethane 2A:1B two component, flexible, weather-resistant, aliphatic polyurethane coating with a maximum VOC 420 grams per liter, meets military specification MIL-C-85285A (AS).

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 Ultra Surface Products Manual Section 2].

PRIME COAT: Following the proper surface preparation, prime the surface with Ultra Surface Epoxy 200 2A:1B or WB Epoxy Clear 4A:1B. The best primer to use will depend on the job application and conditions.

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 Ultra Surface 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 M.E.K. 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

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Technical Information

Physical Properties

Mixing Ratio	2 parts A to 1 part B
Coverage Rate	300-400 sq. ft./gallon
Solids Content, Pigmented	70% [by weight]
Solids Content, Clear	60% [by weight]
Application Temperature	50 degrees or above
Pot life [77 degrees]	1-2 hours (less in hotter temperatures)
Dry to Touch (77 degrees)	4-6 hours
Recoat Time	8-12 hours
Light Traffic	24 hours
Full Cure	7 days
Gloss [60 degrees]	90-95
Hardness [Konig]	127
Tabor Abrasion [1000 gm. load 1000 cycles, CS 17 wheel]	34 mg. loss
Flexibility [ASTM D-222]	passes 1/8 inch
Impact Resistance [ASTM D-2794]	passes 38 in./lb. direct
2000 hr. salt water splash test	Passes
V.O.C.	420 grams per liter
Wet Film Thickness	3 mils
Dry Film Thickness	2 mils
Shelf Life	2 years

[When stored in temperatures between 50-80 degrees in un-opened containers.]

Chemical Composition

Polyester resin cross-linked with aliphatic isocyanate. Modified with U.V. absorbers and hindered amine light stabilizers.

Colors

Available in any color or clear.

Limitations

Must be used over the proper primer depending on the Substrate.

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 - Ultra Surface HP Urethane can be made to dry faster by using Ultra Surface HP Accelerator. When using the accelerator, mix 10-30 drops of accelerator in a small amount (1/4 cup) of M.E.K. (Methy, Ethyl, Ketone) and mix to a uniform consistency. Add the mixture of Accelerator and M.E.K. to the already mixed HP Urethane, then apply as usual. Accelerated HP Urethane can generally be re-coated in 4-6 hours.

CHEMICAL RESISTANCE (ASTM D-1308 24 HOUR IMMERSION)

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

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 resistence 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.

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.

WARNING: Material is combustible. Extinguish all flames, pilot lights and electric motors until all vapors are gone and the coating is hard. The vapor is harmful. Use only with adequate ventilation/or appropriate cartridge-type respirator. Avoid contact with skin; wear protective gloves. Read Material Safety Data Sheet before using.

WARRANTY INFORMATION: Concrete Solutions guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. Concrete Solutions makes no other warranty, expressed or implied, and all warranties of merchantability and fitness for a particular purpose are hereby disclaimed. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product.