

HIGH WEAR ULTRA

ENVIRONMENTALLY FRIENDLY URETHANE COATING

Technical Data Sheet

DESCRIPTION:

A unique three component, 95% solids, moisture cured urethane with outstanding abrasion resistance. Can be used as a clear or in combination with UR-4 Color Add to provide a variety of different colored floors.

USES:

HIGH WEAR ULTRA is designed for areas exposed to heavy industrial traffic, such as, loading docks and traffic aisles. It is designed to accept punishing steel wheel traffic and is safe to use around odor-sensitive stock.

ADVANTAGES:

- Durability surpasses standard urethanes
- Complies with VOC/VOS Rules and Regulations, and L.A. Rule 66
- No odor
- Maintains a semi-gloss finish and extends useful life of floor
- Pre-proportioned batches for error-free mixing
- Resists heavy wheeled traffic
- Excellent resistance to a broad range of chemical spillages
- Good UV light resistance
- Wide range of colors with UR-4 Color Add

PACKAGING:

HIGH WEAR ULTRA is packaged in pre-proportioned units for error-free jobsite mixing and application. Each unit consists of 1 container of Part "A" Resin, 1 container of Part "B" Hardener and 1 container of Part "C" Aggregate. The two liquid components are filled to the correct fill weight.

COVERAGE:

Each gallon of HIGH WEAR ULTRA will cover approximately 500-600 sq. ft. at 2.6-3.2 wet mils.

ASSOCIATED PRODUCTS:

Preparation: PC-40 DYNOMITE
 PC-41 SOLV-KWIK
 PC-42 ACID CONDITIONER

Priming: PR-7 FLEX PRIME

GENERAL PRODUCT DATA:

Colors: A variety of colors available with use of UR-4 Color Add

Coverage: 500-600 sq. ft. per gallon @ 2.6-3.2 wet mils

Dry Film Thickness: 2.5-3.0 mils

Mixing Method: Low speed with "jiffy" mixer

Application Method: High quality 1/4" nap roller

Pot Life w/ UR-4: Approx. 6 hrs. @ 75°F.

Thinner: NOT RECOMMENDED

Shelf Life: 1 year in unopened containers.

Dry Time for 3 mils @ 77°F and 50%RH: 4.5 hrs. – w/o UR-4
 5.5 hrs. – w/ UR-4

Recoat Time @ 77°F: (4.5-5.5) – 24 hrs. After 24 hrs., screen

TYPICAL PHYSICAL PROPERTIES:

Type Test	Test Method	Typical Value
Percent Solids, by wt.	ASTM D2369	Part A – 98.55
		Part B – 13.00
		Part C – 100
		Mixed – 92.4
		Mixed w/ UR-4 – 93.0
Density, lbs/gal	ASTM D1475	Part A – 9.59
		Part B – 8.78
		Part C – 33.00
		Mixed – 12.12
		Mixed w/ UR-4 – 12.37
Viscosity, cps Brookfield	ASTM D2196	Part A – 900-1000
		Part B – 10-20
Volatile Organic Compounds, lb/gal (g/L)	ASTM D3960	Mixed – 0.92 (110.5)
		Mixed w/UR-4 – 0.87 (105)
Abrasion Resistance, mg loss Taber Abraser	ASTM D4060	Clear: 25-30 mg loss
		w/UR-4: 20-25 mg loss

Above typical values based on 7 days cure @ 75°F, 55% RH

LIMITATIONS:

This product is not designed for exterior use, immersion, or any use where moisture can reach the underside of the coating. Do not apply to concrete floors less than 60 days old. Do not apply to floors previously treated with curing and parting compounds or other coatings unless they have been completely removed by chemical or mechanical means. Do not use on vinyl, asphalt, rubber, glazed tile, paving brick, quarry tile, Mexican tile, or similar materials.

Technical Data Sheets are updated periodically. To ensure the most current version is being used, visit Technical Resources on www.valsparflooring.com.

Proper material application is the responsibility of the user. Site visits by Valspar personnel are for making technical recommendations only and not for supervising or providing quality control.

Do not apply if the floor, air, or material temperature is below 65°F or over 90°F or if the relative humidity is below 10% or above 80%. Do not apply over honeycombed or structurally unsound surfaces.

Do not exceed 7 wet mils when applying the product. Foaming of the film will occur.

Before applying for protection against specific chemical environments, consult Chemical Resistance Guide or Valspar Technical Service.

Sealed surfaces may discolor under tires due to tire plasticizer migration.

If the product is to be applied in or near areas containing foodstuffs, they should be removed before the application and until the coating has fully cured and all vapors have dissipated.

Do not thin this product. Addition of thinners will slow down the cure and reduce the ultimate properties of this product.

As with all high performance coatings, the cured product may become slippery when wet or if exposed to oily conditions.

If there is any question as to whether or not the product will adhere to an existing coating, a test patch should be applied and evaluated for compatibility and adhesion.

This product is not intended to be sprayed.

This product has a limited pot life.

PRELIMINARY FLOOR INSPECTIONS:

In general, the area to be surfaced must be clean, sound, dry and above 65°F to assure a successful installation. Concrete must be at least 60 days old.

If there is uncertainty as to whether or not a curing compound or any coating is present on the floor, the following two tests may be performed in order to find out:

1. Pour a cup of water on three or four areas of the floor. If the water puddles out, then there probably is no curing compound or any coating on the floor, and the preparation process may begin. However, if the water beads up like on a waxed car, this may indicate the presence of a curing compound or any coating that must be removed by chemical or mechanical means.
2. Place a drop of PC-42 ACID CONDITIONER on the floor. If the acid bubbles, neither a curing compound nor a coating is present.

Always be alert to any possible airborne or surface contaminants, which may contribute to problems such as fisheyes, crawling, cratering, etc.

The concrete floor should be examined for the presence of moisture. This can be accomplished by the following means:

1. Calcium Chloride Test
2. Delmhorst Moisture Meter
3. Polyethylene Sheet Method

Calcium Chloride Test: This test method works by a change in weight of moisture absorbing anhydrous calcium chloride and indicates the amount of moisture transmitting out of a large concrete surface area. Pounds are the equivalent weight of the water that is emitted from a 1,000 square foot concrete slab surface area in a 24-hour period of time (standard test duration is 60 hours). Concrete must not show moisture content greater than three pounds per 1,000 square feet in 24 hour time frame. Follow instructions as outlined by the supplier of the test kits. Make sure the concrete surface to be tested is completely clean of any residue and any debris. All seals, including curing compounds must be removed prior to performing tests. Sources: Roofing Equipment Inc., Denver, CO 303-371-7667; Sealflex Industries Inc., Costa Mesa, CA 714-708-0850; Vinyl Plastics Inc., Sheboygan, WI 920-458-4664; and Floor Seal Technology, San Jose, CA 408-436-8181.

SURFACE PREPARATION:

All oil, grease, wax, laitance, curing compounds, water-soluble concrete hardeners and other surface contaminants must first be removed. PC-43 WASH OFF REMOVER or PC-46 DRY EZE should be used for removal of sealers, finishes and paints. Inspect the concrete and remove loose or soft concrete by scarifying or blasting. Do not proceed with surface preparation or application until any unacceptable conditions have been corrected.

STANDARD TESTS:

Refer to the standard test methods below for further information.

ASTM D 4258-83	Standard Practice for Surface Cleaning Concrete for Coating
ASTM D 4259-83	Standard Practice for Abrading Concrete
ASTM D 4260-83	Standard Practice for Acid Etching Concrete
ASTM D 4262-83	Standard Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces

CHEMICAL PREPARATION:

PC-40 DYNAMITE should be used as directed to remove all traces of grease, oil, and dirt followed by a thorough rinsing to remove all cleaning residues. Remove excess water with a good wet vacuum. To remove laitance and to give a slight texture to area to be surfaced, acid-etch using PC-42 ACID CONDITIONER. Using a 1:1 dilution ratio with water, apply evenly as possible to the surface and vigorously scrub into the surface with a stiff bristle brush or automatic scrubber. Thoroughly rinse with copious quantities of water and use wet vacuum to remove any residues. Repeat this process until concrete surface is the texture of medium grit sandpaper.

MECHANICAL PREPARATION:

Mechanically abrade or "shot-blast" the surface to the texture of medium grade sandpaper, then vacuum up any dust. Whenever "shot-blasting" is utilized, be careful to leave concrete with a uniform texture. Over "blasting" will result in reduced coverage rates of the PR-7 FLEX PRIME and/or subsequent topcoats. It is also possible that the texture of the "shot-blast" pattern may show through the last coat.

PRIMING:

PR-7 FLEX PRIME should be applied at a rate of 300-400 sq. ft. per gallon. For rougher areas or floors that have been "shot-blasted", coverage will be reduced to 200-300 sq. ft. per gallon. A second coat may be required to satisfy substrate porosity. Allow to dry thoroughly (varies with temperature and humidity) until tack free before coating.

MIXING:

It is important to remember that this coating has a limited pot life. Therefore it is wise to check and make sure everything is in order before starting the mixing sequence.

Color Additives: This system can be used with UR-4 Color Add. Thoroughly mix the UR-4 Color Add before adding to HIGH WEAR ULTRA to ensure uniform color. The appropriate UR-4 Color Add is added to the Part A Resin at the rate of one (1) quart per container. Mix at low speed for a minimum of two minutes.

VALSPAR FLOORING

1. The Part A Resin must be thoroughly mixed with a Jiffy mixer and slow speed drill prior to the addition of Parts B and C.
2. Carefully empty the contents of the Part B Hardener and Part C Aggregate entirely into the can of Part A Resin under agitation. The Part A container is oversized to allow for easy mixing.
3. Mix with a very low speed jiffy mixer, until completely blended. This will take about 3 minutes. Be careful not to introduce any air bubbles while mixing.
4. Due to the difference in viscosity between the Part A Resin and Part B Hardener, care must be taken to ensure that both components are thoroughly mixed in order to avoid weak or partially cured spots in the coating.
5. Since this product does not need any induction time, it should be used immediately after mixing.

APPLICATION:

Apply the HIGH WEAR ULTRA at the rate of 500-600 sq.ft./gal. with a high quality 1/4" nap roller. To ensure the proper appearance and physical properties of the finished floor, it is critical that the material not be applied above or below the recommended rate.

NOTE: Do not apply this product at greater than 7 wet mils. Foaming of the product will occur.

1. Pour properly mixed material into roller tray.
2. Dip roller and lightly roll out excess in the roller tray. Apply two 8-10 foot passes on the floor, making one from left to right and one right to left. Repeat this process twice more so that there are six adjacent passes.
3. Utilizing V-shaped cross passes, spread the material evenly. The area should contain just enough coating to cover evenly.
4. Level the area with straight passes that are perpendicular to the initial passes. Continue to work the area until the appearance is satisfactory.
5. Remix the material in the tray occasionally to prevent settling of the Part C Aggregate.
6. Continue steps 2-5 until project is complete.

POT LIFE:

The pot life of HIGH WEAR ULTRA with UR-4 Color Add is approximately 6 hours at 77°F.

CURE TIMES:

At a temperature of 77°F and 50% Relative Humidity, HIGH WEAR ULTRA Clear will dry in 4.5 hours and pigmented with UR-4 Color Add will dry in 5.5 hours. Allow 24 hours at this temperature and RH before placing the floor in service. Lower temperatures and RH levels will extend the cure times.

CLEAN-UP:

Equipment should be cleaned immediately after use with soap and water or UR-9 MCU THINNER.

CRITICAL RECOAT TIME:

It is important to apply subsequent coats of this product within 4.5-5.5 to 24 hours (under normal curing conditions). If this coating is allowed to cure longer than the 24 hours before subsequent recoats, screening will be necessary. The floor surface should be screened to the effect that a uniform dullness is achieved. There should be no gloss present on the floor before applying the next coat.

TROUBLE SHOOTING:

PROBLEM OBSERVED	POSSIBLE CAUSES
Fisheyes	Oil Contamination; Improper substrate cleaning; Mold Release Agents; Improper Mixing.
Peeling From Substrate	Insufficient preparation process; Oil impregnation; Moisture in concrete.
Peeling Between Coats	Past critical recoat time; Contamination between coats.
Coating Soft, Dulling	Improper mixing; Use of thinner in product; Extreme weather conditions.
Slow Cure	Low floor and ambient temperatures; Use of thinner in product; Improper mixing; Product applied too thin.
Fast Cure	High floor and ambient temperatures.
Bubbling	Product applied at greater than 7 wet mils; High temperatures; No primer used; Working product past pot life; Improper mixing overworked the product.

REFER TO MATERIAL SAFETY DATA SHEET FOR FURTHER SAFETY AND HANDLING INFORMATION.

See individual labels for more caution statements.

KEEP OUT OF THE REACH OF CHILDREN.

DISPOSAL:

Dispose in accordance with federal, state, and local regulations. Use licensed hazardous waste company.

Empty containers may contain product residue, including flammable or explosive vapors. Do not cut, puncture or weld on or near container. All label warnings must be observed until the container has been commercially cleaned or reconditioned.

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