ADVANCED RESINS

Hard Coat 88

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Description: High Solids Aliphatic Roll-Down Coating

Hard Coat 88 is a 87% solids, two component, Aliphatic MDI and multifunctional polyurea aspartic amine blend specifically designed as a pure polyurea slow system roll-down. The EX is the designation for the Poly Extended Cure providing additional working time compared to the Poly Fast Setting product. The polymer structure is very clear and may be pigmented, is non-yellowing, very tough, excellent color retention, good chemical resistance with excellent adhesive properties. Hard Coat 88 is a reactive two component system highly resistant to staining and marking.

The Hard Coat 88 "roll-down" polyurea is used as a clear finish coat with good elongation and flexibility. The Hard Coat 88 aliphatic product conforms to the requirements of the USDA for incidental food contact and is formulated to be non-color changing, abrasive resistant, non-brittle, flexible, quick set with impact resistance.

Unique Characteristics:

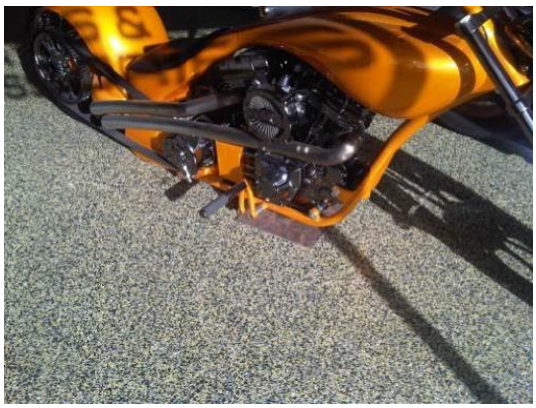
Hard Coat 88 is a unique Aliphatic Polyurea/Aspartic that has extended working time allowing for easier applications in areas where the faster version would not be appropriate or would set to quickly. This product can be supplied with a non-skid additive that is incorporated into the product while the product is in the liquid state. The aggregate is a special plastic aggregate from Advanced Resins, "SSR" aggregate.

Advantages

- ALIPHATIC POLYUREA/ASPARTIC DOES NOT CHALK OR YELLOW
- CURES TO A VERY CLEAR FINISH
- HIGH STAINRESISTANCE TO MOST TIRES
- EXCELLENT UV RESISTANCE
- SETS QUICKLY
- GOOD WORKING TIME
- CHEMICAL RESISTANT
- EXCELLENT ABRASIVE RESISTANCE
- HIGHLY ADHESIVE
- BEAUTIFUL CLEAR APPEARANCE
- WATERPROOFING ELASTOMERIC SYSTEMS
- GOOD ELONGATION
- FAST "TURN-AROUND" FLOOR APPLICATIONS
- COLOR CHIP FLOORS & COLOR QUARTZ FLOORS

USES

- DECORATIVE FLOOR FINISHES
- INDUSTRIAL FLOOR COATING
- KITCHEN FLOOR SEALING & FINISHING
- WATER FEATURE APPLICATIONS
- CLEAR TOP COAT FOR COLOR CHIPS & COLORED QUARTZ
- SLABS, STAIRS & PEDESTRIAN WALKWAYS
- DECKS, WOOD STRUCTURES, INDUSTRIAL WALL & FLOOR APPLICATIONS, EXTERIOR APPLICATIONS



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General Physical Characteristics

Solids	87%
Shelf Life	1 year
Potlife @ 70F	≈15-25 minutes
Hardness ASTM D2240,	Shore A 85 & 50D
Mix Ratio	1:1
Tack Free ASTM D2471	1-1.5 hrs.
Tensile ASTM D412	>7000 psi
Tear Strength D470	850lbs./in.
Elcometer Test	Pulled to concrete failure
Abrasion (CS17) ASTMD4060-90	4.0mg/1000/500 cycles
Gel Time (surface applied)	20 min @ 75°F
Permeability ASTME96(WVT)	0.053grms/hr/sqft
Elongation ASTM D124	50-60%
Processing Temperature	70°F
Viscosity@ 25°C cps, UV	450+/-50
Resistance	High

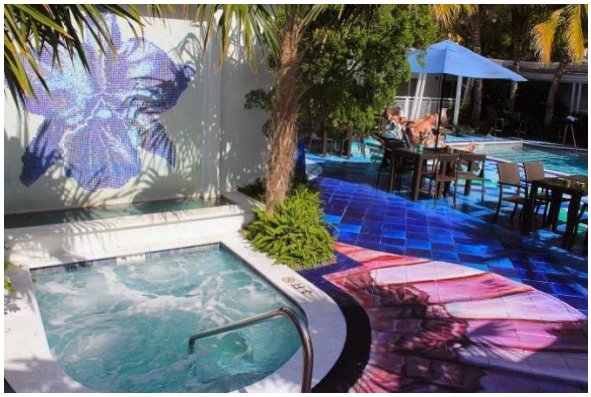
Compressive Strength; 8 hrs. – 7300 psi, 24 hrs. – 11,200 psi, 7 day – 14,100 to 19,000 psi

More Working Time: 5000 Aliphatic Series product is also formulated with a long working time, in high heat and high humidity conditions – Poly H.

Chemical Resistance Hard Coat 88 Chemical

	24 hrs.	7 days
10% Acetic Acid	+	- yellowing
100% Ethanol 200 proof	+	+
50% Sulfuric Acid	+	+
38% Hydrochloric Acid	+	+
10% NaCl	+	+
28% Ammonia	+	+
85% Lactic Acid	+	- down gloss
5% to 10% Clorox Bleach	+	+
Citrus Cleaning Solvent	+	- slight blisters
Skydrol PE-5	+	+
Power Steering Fluid	+	+
Transmission Fluid Dextron	+	+
Motor Oil	+	+
Brake Fluid	+	- slight blisters
Unleaded Gasoline	+	+
Mek	-	-
Xylene	-	-
Tap Water	+	+
Coffee	+	+
Cola	+	+
Grape Juice	+	+
Ketchup	+	+
Mustard	-	- transient yellowing

\+ Positive results, - Negative results



Hard Coat 88 Art – Pool Deck, Spa Area & Flower

Preparation:

Concrete must have a minimum 28 day cure prior to application. Remove any curing agent, form release materials, oils, wax, moisture or any material that may affect bonding. Clean and wash to remove contaminants and maintain pH 8.0-11.0. **Provide rough profile minimum 2 mils. Review ASTM D4259 Abrading Concrete and ASTM F1869 Measuring Moisture Vapor Emission. Seal/repair all bug-holes, cracks and spalls, see Advanced Resins data sheets on 830, 4034.

Note: High Tensile, hard concrete with small aggregate is difficult to grind. It is important to observe the result (appearance) of grinding this type of concrete. It may be necessary to grind this type of concrete with a rougher dry diamond blade to assure a good 2 to 3 mil profile. When coating this type of concrete with the Poly and added pigment, add additional Xylene to the mixed Poly/pigment. It is suggested that about 3 to 4 ounces of Xylene be added to the mix for a gallon (only for high tensile concrete). Check the penetration of the Poly/pigment to assure that the product is getting a "bite' to the hardened or high tensile type of concrete.

Priming:

Poly is self-priming.

Moisture Vapor Reduction:

Use Advanced Resins's CMW to reduce moisture vapor drive.

Efflorescence or white powder-like material visible on the concrete slab indicates moisture vapor drive. See CMW data for efflorescence treatment. Moisture Vapor Transmission of the substrate must not exceed 3lb per 1,000 ft per 24 hours.

Hard Coat 88

Mixing:

Use a jiffy mixer and 650 rpm drill motor to mix product. Mix at slow speed adding part B into part A *while mixing. Do not change the proportions. Mix completely for approximately one to two minutes. Avoid mixing air into the blend. Mix at 1:1 ratio in a separate clean pail, pour out on surface, squeegee and back- roll. Fast set product:

Do not let the mixed p oduct remain in the mixing container. Stick/hand mixing not recommended.

Adding Pigment:

Use 12 ounces (semi-transparent) to 14 ounces for the pigment provided by Advanced Resins. Example; ½ gallon A and ½ gallon B = one mixed gallon – add 14 ounce per mixed gallon of product. If using white add approximately 16 ounces per mixed gallon.

Do not use other pigments as they are not formulated with the proper base materials that are compatible with the Poly.

Do not overload the Poly with pigment, use the minimum amount of pigment for the desired effect.

Important: When adding pigment to the mix of Poly as a base coat is it helpful to add about 3-4 ounces of Xylene per mixed gallon of product and pigment mix. The addition of the solvent helps with dispersion of the pigment and with penetration into the substrate.

Colors:

Tan, Wheat/Straw, Pearl Gray, Medium Gray, and Black. White is also available for adding to the above colors as desired.

Application:

Application range; 45°F to 90°F. Apply the product using a notched squeegee or similar squeegee to move the product over the application area. *Hot surfaces may accelerate gel time of the product. *High Humidity will accelerate the gel time of the product. Product should be back-rolled using a short nap roller, about ¼" to 3/8". **Apply in thin films from 5,8 or 10 mils per coat. Do not apply thicker than 10-12 mils at one time. Recoat Time; apply a second coat as soon as the first coat can be walked on, 1 to 2 hours.

If recoat window is exceeded, sand lightly to produce a profile, wipe with acetone and re-coat.

Curing Time:

Approximately 1.5 to four hours for low foot traffic volume. Cure 5 to 8 hours for heavier foot traffic. Test surface cure to be sure surface is ready for vehicles before allowing access. *Cure is affected by high humidity.*

EX Set Poly version may take a little longer to set in very dry or low humidity conditions and may require one or two days before vehicle traffic may have access to the coated area.

Cold Temperatures:

When environmental conditions are cool or cold and the ambient temperature is about 50 degrees F, the Hard Coat 88 cure will slow down. Although the polyurea product does slow, it will continue to cure but will take longer to develop it's hardness. For applications in reduced temperatures starting at around 50F use the Poly Fast Set. The Poly Fast Set cure will not slow down as much as the Hard Coat 88 product and the Fast Set will develop physical properties, hardness, etc. sooner than the EX will in cold conditions.

Limitations:

Note: The product is resistant to most tires, however, there are some tires that may stain the coating. Not all tires and their characteristics can be tested for staining.

If moisture vapor drive is evident or efflorescence is visible use a vapor barrier CMW. Use compatible surface repair products with Poly. Pot life is effected by environmental temperatures and humidity. Do not use on wet surfaces or expose part A to moisture. Keep out of direct sunlight and store the product kits on wood pallets at room temperature. Use a Nitrogen blanket over unused product for proper storage and protection from humidity. This product is for use by professional applicators only. Wear Protective Clothing and gloves as the product bonds very well to fabrics. Read MSDS before using this product. DOT/ Flash Point – Non-flammable Liquid Classification, not regulated. Warranty: See Advanced Resins Polymers, Inc. Warranty data sheet. (2-14) Product data sheets subject to change without notice.