ULTRA-FLEX 700

A TWO-COMPONENT, FAST-SETTING, FAST-CURING, SOLVENT-FREE, FLEXIBLE, POLYURETHANE, WATER-PROOFING COATING

ULTRA-FLEX 700 is a two- component, fast-setting, fast-curing, solvent-free, flexible, high-performance, high-solids, polyurethane, elastomeric, water-proofing coating that can be applied to suitably prepared interior or exterior concrete, plywood and metal surfaces. Due to its fast gel time, Ultra-Flex 700 is suitable for applications in temperatures as low as 20°F (-6°C). It may be applied in single or multiple applications. Ultra-Flex 700 is also relatively insensitive to moisture and temperature allowing applications in varied temperatures and humidity.

FEATURES

- Non-gassing
- Can be applied at any thickness
- Good thermal stability
- Good chemical resistance
- Meets USDA criteria
- Excellent low temperature flexibility
- Re-coatable
- Seamless

TYPICAL USES

- Vehicular & pedestrian traffic areas
- Sundecks, balconies & roofs
- Mechanical rooms
- Stalls, wash racks, kennel runs
- Walkways, patios & stairways
- Crack repairs & expansion joints

PACKAGING

5 Gallon Kit: One 5 gallon pail, net fill 4 gallons (15.12 liters) of Part-A and one 1 gallon (3.78 liters) can of Part-B.

SURFACE PREPARATION

Concrete or plywood substrates must be free of all contamination that may impair proper bonding. Substrates must be sloped a minimum of 4" per foot for drainage, and must be primed with the applicable primer prior to application of the membrane and surface protection materials.

Concrete

The surface of concrete substrates must be clean and free of standing water. All holes, joints and cracks must be pointed flush with Portland Cement mortar and all high spots cut or ground off to provide a smooth, even surface. Before the material is applied, the substrate must be clean and free of dust or foreign material. Paint, grease and oil must be removed either by grinding or sandblasting and concrete surfaces must be shot-blasted or water-blasted. Control joints should be cut per standard concrete construction practices and caulked. Concrete must exhibit 3000-psi minimum. Concrete surfaces to be coated must be trowel finished in compliance with the American Concrete Institute (except that hand troweling is not required), followed by a fine hair brooming, left free of loose particles, and shall be without ridges, projections, voids and concrete droppings that would be mechanically detrimental to coating application or function.

New and Old Concrete

Refer to SSPC-SP13/NACE 6, or ICRI 03732: CSP 3-5. New concrete must be cured for 28 days prior to product application. Surface must be clean, dry, sound and offer sufficient profile for product adhesion. Remove all dust, dirt, oil, form release agents, curing compounds, salts, efflorescence, laitance and other foreign matter by shot-blasting and/or suitable chemical means, in accordance with local chemical regulations. Rinse thoroughly, to achieve a pH between 8.0 and 11.0. Allow to dry completely.

Surface Preparation Reference

ASTM D4258
Standard practice for cleaning concrete
ASTM D4259
Standard practice for abrading concrete
ASTM D4260
Standard practice for etching concrete
ASTM F1869
Standard test method for measuring moisture vapor emission rate
ICRI 03732
Concrete surface preparation

Plywood

Plywood should be new or cleaned and sanded. Plywood must be exterior grade plywood, having either tongue- and groove edges and ends perpendicular to supports. The plywood will be 19/32" or 21/32" thick. Plywood should be installed with a maximum of 1/16" space between the plywood sheets and laid over joists on 16" centers. Plywood sheets must be screwed down securely or nailed with coated annular ring or screw shank nails. If the underside of the joists is covered, the floor/ceiling cavity must be vented to aid in drying and to minimize moisture buildup in the deck structure. Damaged panels will be repaired/ replaced before coating. Old plywood must be cleaned and sanded before priming with Ultra-Prime 125 at a rate of 1 gallon per 300 ft² prior to coating application. The only acceptable grade of plywood is APA rated, exterior grade with exterior glue or better. The appear-ance and physical characteristics of the plywood and grade should be consid-ered. The plywood grade is called out in compliance with the American Plywood Association's Standard. Plywood grading which does not reference APA markings may not be a suitable grade.

MADE IN U. S. A.

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PRIMING

Surfaces to which Ultra-Flex 700 will be applied must be properly prepared and then primed with the appropriate primer. Read primer data sheet for instructions regarding mixing and application.

Concrete/Plywood……..Ultra-Prime 125
Existing Urethane……...Ultra-Prime 150
Metal……Ultra-Prime 165

MIXING

Ultra-Flex 700 may not be diluted under any circumstances. Proportions are premeasured. Using a mechanical mixer, first pre-mix separately Part-A and Part-B base material thoroughly to obtain a uniform color, making sure to scrape the solids from the bottom and sides of the pail. Pour Part-B into Part-A slowly and while mixing, scrape the sides of the container. Mix for 1-2 minutes. Box the materials. Mix the combined Part-A and Part-B mixture thoroughly until uniform color is obtained. Do not mix in an up and down motion.

APPLICATION

Ultra-Flex 700 should be applied at a temperature of 20°F (-6°C) and above. For best results, use a squeegee or notched trowel. A phenolic resin core roller may be used but extra care should be taken not to trap air which may result in bubbles. Requires a continuous coating application to minimize lines and/or streaking.

It is recommended to apply an aggregate of washed, dry, rounded sand, approximately 16 or 20 mesh (0.0331 - 0.0469 in.; 0.84 -1.19mm), 6.5+ Mohs minimum hardness at a rate of 20 lbs/100 ft² (1 kg/sqm) or as required to achieve a slip resistant finish, into the wet second coat, covering it completely. Broadcast sand until refusal and when the coating is dry, remove extra loose sand, preferable by vacuum .

An aggregate of 14-30 rubber granules may be broadcast into the membrane at a rate of 10 lbs/100 ft² (0.5 kg/sqm) or to refusal. The amount of rubber used will vary. When coating starts to gel, in approximately 20-30 minutes, broadcast 14-30 mesh (0.56-1.41 mm) rubber granules until refusal.

The quantity amount of rubber granules will vary (normal usage is 20 lbs/100 ft²). When the coated surface is stiff enough to support the weight of the installer without damaging the coating or when the coating is dry approximately 4-6 hours), remove all loose aggregate, preferably by vacuum.

COVERAGE

Ultra-Flex 700 may be applied at any rate to achieve desired thickness. Theoretical coverage for 24 mil thickness is one gallon per 67 ft².

CURING

At 75°F (24°C) and 50% relatively humidity, allow each coat to cure for 2 to 4 hours before applying subsequent coats. Cure time will vary depending on temperature and humidity. If more than 48 hours passes between coats, re-prime with Ultra-Prime 150 before proceeding.

EQUIPMENT CLEANUP

Equipment should be cleaned with an environmentally safe, polyurethane-grade solvent (alcohol free) as permitted under local regulations immediately after use.

STORAGE

Ultra-Flex 700 has a shelf life of one (1) year from date of manufacture in original factory sealed containers when stored indoors at a temperature between 60-95°F (15-35°C).

LIMITATIONS

- Surface must be dry, clean and free of foreign matter
- Ultra-Flex 700 is not UV stable and should be top-coated with Ultra-Flex 750
- Do not open until ready to use
- Containers that have been opened must be used as soon as possible
- Do not dilute under any circumstance
- Any off ratio mixing of the product will affect the properties and the product may not cure
- Surface may be slippery when wet
- Do not apply over split slabs, buried membrane, sandwich slabs with insulation, slabs over unvented metal pan, magnesite, lightweight concrete, asphalt surfaces & asphalt overlays
- A moisture-vapor transmission test should be performed for on grade slabs prior to application

TECHNICAL DATA

Coverage Rate
1 gal/100 sq. ft. (0.41 l/sqm)
Dry Film Thickness per Coat
15± 1 mils (381± 25 microns)
Mix Ratio
4A:1B
Hardness, ASTM D-2240
64 ± 2 Shore A
Tear Resistance, Die C, ASTM D-624
230 ± 25 pli (40.3± 4.4 kN/m)
Split Tear, ASTM D-470
60 ± 5 pli (10.5 ± 0.9 kN/m)
Tensile Strength, ASTM D-412
1500 ± 100 psi (10.3 ± 0.7 MPa)
Ultimate Elongation, ASTM D-412
1000 ± 100%
Specific Gravity
Side A = 1.03 ± 0.1
Side B = 0.98 ± 0.1
Total Solids by Weight, ASTM D-2369
94 ± 2%
Total Solids (Volume), ASTM D-2697
95 ± 2%
Viscosity at 75°F (24°C)
Side A = 2500-3000 ± 500 cps
Side B = 100 ± 50 cps
VOC's, ASTM D-2369-81
< 0.04 lb/gal (<5 gm/liter)
Color
Gray

WARNING

This product contains Isocyanates and Curative Material.

For technical assistance call 978-453-8881.

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LIMITED WARRANTY

The manufacturer guarantees its products to be free of defects and the extent of its liability is limited to the purchase price of the materials only, if proved to be defective. Improper mixing, incorrect application or other factors beyond the control of the manufacturer or its dealers may produce unsatisfactory results and cannot be held to be the manufacturers or its dealers responsibility. There are no other guarantees either expressed or implied. (2021)

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