



2870 CRESTWOOD BLVD. STE B
IRONDALE, AL 35210
205-857-0040



DEFENDER

DEFENDER AP72

TECHNICAL DATA SHEET

DESCRIPTION

Defender AP72 is an aliphatic, polyaspartic, environmentally-friendly surface topcoat for waterproofing membrane systems. Defender AP72 is quick curing and specifically formulated to be installed in thin film applications. UMI Coatings offers products in different VOC's ranging from 100 to 340 gms/liter to comply with VOC requirements in various regions. Make sure to use the correct grade of product which complies with VOC regulations/requirements applicable as per federal, state, statutory, counties, cities and local bodies at the place of installation.

FEATURES

- Abrasion Resistant
- Color Stable
- Excellent Weatherability
- High Gloss
- High Tensile Strength
- Quick Cure
- Seamless Waterproofing Membrane
- UV Resistant for Superior Gloss Retention
- Very Durable

TYPICAL USES

- Concrete
- Cold Storage Areas
- Chemical Plants
- Fertilizer Plants
- Food Processing Areas
- Industrial Warehouses
- Off-Shore Oil Platforms
- Pipeline Barges
- Pulp and Paper Mills
- Steel

PACKAGING

2-Gallon Kit

1 gallon (3.78 liters) can Side-A and 1 gallon (3.78 liters) can Side-B

10-Gallon Kit

One 5 gallon (18.9 liters) pail of Side-A and One 5 gallon (18.9 liters) pail of Side-B 10-gallon (37.85 liters) kit is not a stock item and is available with minimum order of 100 gallons (378 liters)



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BASED ON DRAW DOWN FILM	CLEAR	PIGMENTED
Mix Ratio by Volume	1A: 1B	1A : 1B
Coverage Rate	1 gal/100 sqft (0.41 l/sqm)	1 gal/100 sqft (0.41 l/sqm)
Dry Film Thickness per Coat	14 ± 2 mils 356 ± 50 microns	14 ± 2 mils 356 ± 50 microns
Pot Life @ 75°F (24°C), 50% R.H.	25-30 minutes	45-60 minutes
Hardness, ASTM D2240	65 ± 5 Shore D	65 ± 5 Shore D
Tear Resistance, ASTM D624	400 ± 50 pli 70.1 ± 8.8 kN/m	400 ± 20 pli 70.1 ± 8.8 kN/m
Tensile Strength, ASTM D412	3500 ± 300 psi 24.1 ± 2.1 MPa	3500 ± 300 psi 24.1 ± 2.1 MPa
Ultimate Elongation, ASTM 412	50 ± 10%	50 ± 20%
Specific Gravity, Side A Side B	1.07 ± 0.1 1.02 ± 0.1	1.07 ± 0.1 1.27 ± 0.1
Total Solids by Weight, ASTM D2669	90 ± 2%	91 ± 2%
Total Solids by Volume, ASTM D2697	88 ± 2%	89 ± 2%
Viscosity at 75°F (24°C), Side A Side B	200 ± 50 cps 1000 ± 50 cps	200 ± 50 cps 1400 ± 200 cps
Volatile Organic Compounds, ASTM D-2369-81	0.83 lb/gal 100 gm/liters	0.83 lb/gal 100 gm/liters

(*These physical properties from sample sprayed with Graco Foam Cat 200 @ 2000 psi minimum, with Gusmer Gx7-400 mechanical purge gun @ 150-160°F (65°C to 71°C). Different machine and parameter will change these properties. User should perform their own independent testing as properties are approximate).

COLORS

Clear, Tan and Dolphin Grey.

Custom colors are also available. Minimum order of 100 gallons (378 liters). See color chart for special provisions. Contact UMI Coatings for more information.



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COVERAGE

The approximate coverage is 1 gallon/100 sqft (0.41 l/at 14 mils). Coverage rate will depend on surface roughness and porosity.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion. Refer to product General Guidelines for detailed surface preparation information.

Minimum recommended surface preparation:

METAL: SSPC-SP6/NACE 3, 2 mils (50 microns) profile.

CONCRETE & MASONRY: SSPC-SP13/NACE 6 or ICRI No. 310.2 CSP 3-5. Primer required.

MIXING

Defender AP72 may not be diluted under any circumstance. Defender AP72 Side-A and Side-B should be mixed individually before combining. Add Side-B to Side-A while mixing, using a mechanical mixer at medium speed. Mix until a homogeneous mixture and color is attained (at least 5 minutes) and mix frequently during application to maintain uniform color. Use care to scrape the sides of the container to ensure that no unmixed material remains. Use caution not to whip air into the material as this may result in pinhole blisters and/or shortened pot life. Do not mix in an up and down motion. Do not mix any material that cannot be used within 45 minutes.

APPLICATION

Defender AP72 can be applied by phenolic resin core roller, high pressure spray, or through a cup gun under low pressure. Defender AP72 should be applied at a minimum film thickness of 5 mils (127 microns). It should be noted that the heavier the application, the longer the curing process takes. Apply Defender AP72 evenly over the entire deck. For best results, use an airless sprayer. A phenolic resin core roller may be used, but extra care should be taken not to cause air bubbles.

CURING

At 75°F (24°C) and 50% relative humidity, allow each coat to cure 2-4 hours. Allow 6 hours before permitting light pedestrian traffic and at least 24-48 hours before permitting heavy pedestrian traffic on to the finished surface.

Uncured Defender AP72 is very sensitive to heat and moisture. Higher temperatures and/or high humidity will accelerate the cure time. Use caution in batch sizes and thickness of application. If more than 12 hours have passed after applying clear coat of Defender AP72, then re-prime surface with Defender PR58 and apply Defender AP72 pigmented coat. If clear coat is required, then clear coat should be applied only after pigmented coat.

If clear coat is applied after primer, the primer will become yellowish with exposure to light and surface will look not aesthetically pleasing. Low temperature and/or low humidity extend the cure time.



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EQUIPMENT CLEAN UP

Equipment should be cleaned with an environmentally safe solvent, as permitted under local regulations, immediately after use.

STORAGE

Defender AP72 has a shelf life of 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

The following conditions must not be coated with UMI Coatings deck coatings or systems: split slabs, buried membrane, sandwich slabs with insulation, slabs over unvented metal pan, magnesite, and non-structural lightweight concrete. On grade slabs may receive UMI Coatings system coatings provided a moisture-vapor transmission test is first performed. Please contact UMI Coatings' technical department with the results. With regard to coating asphalt surfaces, please contact UMI Coatings' technical department. Surfaces must be dry, clean and free of foreign matter. Clear coating may turn opaque and cloudy due to moisture penetration, especially in exterior applications. Surface may be slippery when wet. Containers that have been opened must be used as soon as possible. Do not dilute under any circumstance.

Warning: This product contains Isocyanates and Solvent.

DISCLAIMERS

Limited Warranty: Please read all information in the General Guidelines, Technical Data Sheets, Guide Specifications and Safety Data Sheets (SDS) before applying material. These products are for professional use only and preferably applied by professionals who have prior experience with the UMI Coatings materials or have undergone training in application of UMI Coatings materials. Published technical data and instructions are subject to change without notice. Contact your local UMI Coatings representative or visit our website for current technical data, instructions, and project specific recommendations. UMI Coatings warrants its products to be free of manufacturing defects and that they will meet UMI Coatings' current published physical properties. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product which proves to be defective. There are no other warranties by UMI Coatings of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. UMI Coatings shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. UMI Coatings shall not be responsible for use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee is being issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. UMI Coatings reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

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