



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



DEFENDER

DEFENDER AP70

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

Defender AP70 is a fast setting, rapid curing, 100% solids, flexible, aliphatic, two component, spray polyurea with excellent color retention. It can be applied to suitably prepared interior or exterior concrete and metal surfaces. It has extremely fast gel time making it suitable for applications down to -20° F (-28.89°C). It may be applied in single or multiple applications without appreciable sagging and is relatively insensitive to moisture and temperature allowing application in most temperatures. Defender AP70 offers a tack free time of less than two minutes and exhibits 300% elongation upon curing with 50 Shore D hardness.

FEATURES

- Coats Carbon or Mild Steel Metals Without Primer
- Elastomeric
- Excellent Thermal Stability
- Good Chemical Resistance
- Installed With or Without Reinforcement in Transitional Areas
- Low Temperature Flexibility
- Meets USDA Criteria
- Odorless
- Seamless
- Zero VOC

TYPICAL USES

- Architectural Finishes
- Cold-storage Facilities
- Fertilizer Plants
- Food-Processing Plants
- Flooring and Parking Decks
- Industrial and Manufacturing Facilities
- Marine Exposure or Submersed Applications
- Mining Operations
- Paper and Pulp Mills
- Power Plants
- Refineries
- Secondary Containment
- TankCoatings External
- Walkways and Balconies
- Warehouse Floors

PACKAGING

10-Gallon Kit

5 gallons Side-A (Isocyanate side) and 5 gallons Side-B (Resin side)

100-Gallon Kit

50 gallons Side-A (Isocyanate side) and 50 gallons Side-B (Resin side)



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BASED ON DRAW DOWN FILM

Mix Ratio by Volume	1A: 1B
Pot Life @ 150-160°F (65.5-71°C), 50% R.H.	10-20 seconds
Tack Free Time	60-180 seconds
Recoat Time	0 - 6 hours
Viscosity at 150-160°F (66.5-71°C) Side-A Side-B	120 ± 20 cps 40 ± 20 cps
Density (Side A & B Combined)	8.50 lbs/gal
Flash Point	> 200°F (93.3°C)
Hardness, ASTM D-2240	50 ± 5 Shore D
Tensile Strength, ASTM D-412*	3300 ± 200 psi 22.7 ± 1.38 MPa
Elongation, ASTM D-412*	300 ± 50%
Tear Strength, ASTM D-412*	400 ± 50 pli 70.1 ± 8.77 kNm
Service Temperature - Dry	-40°F to 250°F -40°C to 121°C
Service Temperature - Wet	40°F to 120°F 4.44°C to 48.89°C
Volatile Organic Compounds (Side-A & B combined) ASTM D2369-81	0 lbs/gal 0 gm/liter
Recommended Applied Thickness	>2mm
Return to Service: Foot Traffic	2-4 hours
Return to Service: Full Service	>24 hours

*Values were obtained in a laboratory setting for comparison purposes only, and should not be considered exact specifications.



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COLORS

Clear/Neutral. Custom colors are available upon request. Color Packs, when used, must be added to Side-B.

SURFACE PREPARATION

In general, coating performance and adhesion are directly proportional to surface preparation. Most failures in the performance of surface coatings can be attributed to poor surface preparation. Polyurea coatings rely on the structural strength of the substrate to which they are applied. All surfaces must be free of dust, dirt, oil, grease, rust, corrosion and other contaminants. When coating previously used substrates, it is important to consider the possibility of substrate absorption, which may affect the adhesion of the coating system, regardless of the surface preparation. UMI Coatings recognizes the potential for unique substrates from one project to another. The following information is for general reference. For project specific questions, contact UMI Coatings.

MIXING

Defender AP70 may NOT be diluted under any circumstances. Thoroughly mix Defender AP70 Side-B (Resin side) with air driven power equipment until a homogeneous mixture and color is achieved.

APPLICATION

Both Side-A and Side-B materials should be preconditioned to 75-80°F (24-27°C) before application. Recommended surface temperature must be at least 5°F (3°C) above the dew point. Defender AP70 should be applied using a plural component, heated, high pressure 1:1 spray mixing equipment like a plural component equipment machine may be used. Both Side-A and Side-B materials should be sprayed at a minimum of 2000 psi and at temperatures above 150°F (66°C). Adequate pressure and temperature should be maintained at all times. Defender AP70 should be sprayed in smooth, multidirectional passes to improve uniform thickness and appearance.

STORAGE

Defender AP70 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). Side-A and Side-B drums are recommended to be stored above 60°F (15°C). Avoid freezing temperatures. Store drums on wooden pallets to avoid direct contact with the ground. If stored for a long period of time, rotate Side-A and Side-B drums regularly.



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LIMITATIONS

Do not open until ready to use. Both Side-A and Side-B containers must be fitted with a desiccant device during use.

Warning: This product contains Isocyanates and Curative Material.

DISCLAIMER

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the user's responsibility to satisfy themselves, by their own information and test, to determine suitability of the product for their own intended use, application and job situation and user assumes all risk and liability resulting from their use of the product. We do not suggest or guarantee that any hazard listed herein are the only ones which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether in writing or oral, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and UMI Coatings makes no claim that these tests or any other tests, accurately represent all environments.