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

DEFENDER

DEFENDER AR57

TECHNICAL DATA SHEET

DESCRIPTION

Defender AR57 is a 100% solids, rapid curing, odorless, flexible, two component, aromatic-spray polyurea developed for specialty application such as a geotextile lining membrane. It may also be applied to concrete and steel substrates. Defender AR57 is volatile free, and mixed at a 1 :1 ratio with plural-component- spray equipment.

FEATURES

- 100% Solids
- ANSI/GRHC/SPRI VR-1 (2001) Compliant
- Excellent Thermal Stability
- Exposure Temperatures -40° F to 350° F (-40°C to 177°C)
- FLL Root Resistance
- Good Chemical Resistance
- Immediate Return to Service
- Low-Curing Stress Shrinkage
- Zero VOC

TYPICAL USES

- Flexible Membranes
- Foam Coatings
- Geotextile Coatings
- Industrial and Manufacturing Facilities
- Liners
- Oil Production Water/Condensate Containments
- Structural Steel
- Typical Ambient Waste Water/Condensate Containments
- Waterproofing Membranes

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.	15-25 seconds
Tack Free Time	60-75 seconds
Recoat Time	0 - 12 hours
Viscosity at 80°F (27°C) Side-A Side-B	 1200 ± 150 cps 400 ± 100 cps
Density (Side A & B Combined)	8.5 ± 0.5 lbs/gal
Flash Point	> 200°F (93.3°C)
Hardness, ASTM D-2240	85 ± 5 Shore D
Tensile Strength, ASTM D-412*	3500 ± 200 psi 24.13 ± 1.37 MPa
Elongation, ASTM D-412*	250 ± 50%
Tear Strength, ASTM D-412*	350 ± 50 pli 61.3 ± 8.8 kNm
Service Temperature	-40°F to 300°F -40°C to 121°C

*These physical properties from sample sprayed with Graco EXP2 @ 2000 psi minimum, with Fusion Gun AP4242@ 150-160° F l65° C to 71° C) blistering. Color change, gloss reduction & chalking are noted. Different machine and parameter will change these properties. User should perform their own independent testing as properties are approximate.

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COLORS

Petro Tan, Industrial Tan, Carlsbad Canyon, and Covert Green. Custom colors are available upon request.

COVERAGE

Defender AR57 may be applied at any rate to achieve desired thickness. Theoretical coverage for 1 mil (0.254 microns) thickness is one gallon per 1600 sqft (3.78 liters per 149 sqm) Estimating Formula: (1600 sqft per gal /Dry Mil Thickness) x Solids Content= Application Rate per gallon.

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 AR57 may NOT be diluted under any circumstances. Thoroughly mix Defender AR57 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 80-90°F (27-32°C) before application. Recommended surface temperature must be at least 5°F (3°C) above the dew point. Defender AR57 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 AR57 should be sprayed in smooth, multidirectional passes to improve uniform thickness and appearance.

STORAGE

Defender AR57 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.

Warning: This product contains Isocyanates and Curative Material. This product is considered Dangerous Goods. Please refer to Safety Data Sheets.

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.