



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



DEFENDER

DEFENDER AR40

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

DEFENDER AR40 is a fast-set, spray-applied, two-component aromatic polyurea that is 100% solids and contains zero VOCs.



FEATURES

Excellent Protection Defender AR40 is formulated for excellent corrosion protection and chemical resistance.

Excellent Impact & Abrasion Resistance Defender AR40 maintains excellent impact resistance even in subfreezing weather and has high abrasion resistance for harsh environments.

Impressive Properties Defender AR40 is odorless with nontoxic vapors, and boasts a seamless monolithic waterproof membrane that is tough and durable.

100% Solids, Zero VOCs Defender AR40 is a 100% solids polyurea and is formulated with zero VOCs. It is UL certified ANSI/NSF 61 in specific colors.

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

TECHNICAL DATA

PROPERTIES OF COMPONENTS	VALUES
Mix Ratio	1:1
Viscosity	A Side: 350 cps B side: 650 cps
Gel Time	11 seconds
Tack Free Time	22 seconds
Colors	Black, Gray, Beige, White

*custom colors available.



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PHYSICAL PROPERTIES

Hardness, D-2240	D52
Tensile Strength, D-412	3850 psi
100% Modulus, D-412	1460 psi
200% Modulus, D-412	1960 psi
300% Modulus, D-412	2650 psi
Tear Resistance/DIE-C, D-624	570 pli
Ultimate Elongation, D-412	425%
Taber Abrasion, mg loss CS17	17.0
Flexibility, 1/8" mandrel	Pass

MIXING AND APPLICATION INSTRUCTIONS

Mixing Instructions: Agitate the resin blend (B) component thoroughly with a drum mixer before use to disperse pigment and assure homogeneity. Do not agitate in air and moisture.

Application Instructions: Defender AR40 must be applied through a plural-component, high pressure proportioning unit. Material and hoses should be heated to 150°F, with pressures at a minimum of 2200 psi.

Be sure to consult with an UMI Coatings representative for equipment and application training.

EQUIPMENT

Fusion AP or equivalent

See Technician for exact recommendation

Spray Tips Specified

Fusion AR2929 or AR4242



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PRESSURE AND HEAT

Spray Pressure

Between 2000 and 2500 psi

Heater Setting A and B

150° to 160°F

Hose Heat

150° to 160°F

SAFETY

This product is for industrial use only. Avoid contact with eyes and skin. Do not inhale or ingest. When spraying, wear a respirator or a fresh air hood. Spraying indoors requires forced ventilation. Consult the MSDS in its entirety prior to using Defender AR40.

PACKAGING, STORAGE AND SHELF LIFE

Defender AR40 is available in 5 gallon pails, 55 gallon drums, and 275 gallon totes. It should be stored in sealed containers between 60°F and 90°F. Shelf life is 12 months when stored in factory sealed containers under normal conditions.

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. Minimum recommended surface preparation:

Steel: Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (3 mils / 75 microns). Prime any bare steel the same day as it is cleaned or before flash rusting occurs, as required.

Concrete & Masonry: SSPC-SP13/NACE 6 or ICRI No. 310.2R-2013, CSP 3-5. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with recommended repair material.



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Moisture Content: Use calcium chloride test: 3 lb./24 hr./1,000 ft². Concrete shall be 5% maximum as per ASTM F2170 & ASTM F2420. Substrate and air temperature must be 5°F above dew point and rising before material application.

Check for soluble salts on surfaces to be coated. If amount of soluble salts exceeds recommended limits, treat accordingly. Repeat process until acceptable limits are reached. Maximum amounts of soluble salts (micrograms per square centimeter): Chlorides—3 immersion, 7 non-immersion. Nitrates—5 immersion, 10 non-immersion. Sulfates—10 immersion, 20 non-immersion.

If required, holiday test in accordance with ASTM D5162 for steel, or ASTM D4787 for concrete.

PRODUCT 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.