



2870 CRESTWOOD BLVD. STE B  
IRONDALE, AL 35210  
205-957-0020



**DEFENDER**

**DEFENDER AR50**

TECHNICAL DATA SHEET

## PRODUCT DESCRIPTION

**Defender AR50** is a flexible, fast set, two component system pure polyurea intended for application on above ground structures. Defender AR50 is UL certified ANSI, available in basic colors and provides excellent physical properties when prepared and installed as recommended. Defender AR50 offers the following advantages:

- Flexibility and durability
- High resistance to chipping and delamination
- High resistance to physical degradation
- Corrosion protection
- Chemical resistance
- Reduced downtime

## COMMON USES

- Steel and wooden tank linings
- Secondary containment
- Pipelines
- Fiber Glass

## APPLICATION PROPERTIES

Mix Ratio	1A:1B (55-gallon drums=110-gallon kit)
Viscosity	Part A=350cps/Part B=650 cps
Gel Time*	8 second
Initial Cure* (approx. 90%)	24 hours
Final Cure*	7 Days

## PHYSICAL PROPERTIES

Product Color-Part A	Non-Pigmented
Product Color-Part B (Specialty Colors Available Upon Request)	Black and Grey
Hardness, D-2240	50.5
Tensile Strength, D-412	3640
Elongation, D-412	2100 psi

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Tear Resistance, ASTM D624	563 pli
Taber Abrasion, mg loss; D 4060	6.4mg
Flexural Modulus; ASTM D790-17	1310 ps
Static Coefficient of Friction; ASTM D1894-14	0.25
Pull Load, PSI (ASTM-D4541) CRS	718 psi
Pull Load, PSI (ASTM-D4541) HRS	872 psi
Shelf life (unopened), min	1 Year

**MIXING INSTRUCTIONS**

Defender AR50 must be mixed by agitating the resin blend (Part B) component thoroughly first with a drum mixer before use to disperse the pigment and assure homogeneity. Do not agitate in open air and when exposed to heavy moisture.

**SAFETY**

This product is for industrial use only. Avoid contact with eyes and skin. Do not inhale or ingest. When spraying, wear proper P.P.E. Spraying indoors requires forced ventilation. Consult the SDS in its entirety prior to using Defender AR50.

**EQUIPMENT NEEDED**

Mix Chamber Specified = Fusion AP - Mix Chamber Standard  
Spray Tips Specified = Round 00 or 01

**PACKAGING, STORAGE AND SHELF LIFE**

Defender AR50 is available in 55-gallon drums. 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 in a temperature controlled environment..

**SURFACE PREPARATION**

- A. Surface of substrates must be clean and sound.
- B. Remove grease, oil, or other foreign material with an approved cleaning agent, wire brushing or sandblasting. Acid etching on the surface is acceptable if followed by thorough flushing with clean water. Surface must be dry before applying. Below 18% moisture content.



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## PACKAGING

Kit: A Side Drum and  
B side Drum; 1:1

## HANDLING PRECAUTIONS

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Use personal protective equipment.

## EMERGENCY AND FIRST AID PROCEDURES

**EYE CONTACT:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do without causing additional concerns. Continue rinsing. Immediately call a poison center or doctor.

**SKIN CONTACT:** Take off immediately all contaminated clothing. Rinse skin with water/shower for at least 15 minutes. Call a poison center or doctor if irritation develops or persists. Wash contaminated clothing before reusing.

**INHALATION:** If breathed in, move the person into fresh air. If not breathing, give artificial respiration. If symptoms persist, get medical attention.

**INGESTION:** Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have the victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

## WARRANTY

Because the storage, handling and application of these materials are beyond our control, we can accept liability for the results of their use. Our liability is limited only to the replacement of any material proven defective within manufacturing. We suggest users try small applications to determine the suitability of the product for their intended use.

**Be sure to consult with a UMI Coatings technician for equipment and application training.**