



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



DEFENDER

Defender Prime - Ceramic Epoxy Primer

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

**Defender Prime** NSF 61/600 potable water tank primer; Single leg airless applied 67% solids moisture cured urethane zinc.

GENERIC TYPE

Polyamide Epoxy

AWWA D102

ICS-1, ICS-2, ICS-3, ICS-4, OCS-5, OCS-6



AVAILABLE COLORS

Beige

AVAILABLE KIT SIZES

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A	5 gal Defender Prime A	1 gal Defender Prime A	1 gal Defender Prime A
B	5 gal Defender Prime B	1 gal Defender Prime B	1 gal Defender Prime LV B
Kit	10 gal Defender Prime kit	2 gal Defender Prime kit	2 gal Defender Prime LV kit

NSF 61/600

For use with tanks greater than or equal to 30,000 gallons, not exceeding a surface area to volume ratio of 11.61 cm<sup>2</sup> /L. Minimum Re-coat/Final Cure Time/temp prior to water immersion: 7 days at 70 deg F, up to 30 mils DFT, up to 10% thinning with Defender Reducer.

**DEFENDER****Defender Prime - Ceramic Epoxy Primer****TECHNICAL DATA SHEET****PERFORMANCE TESTING****PERFORMANCE TESTING**

ASTM B117 Salt Fog	3500 hrs, no effect
ASTM B117 Salt Fog	3500 hrs, minimal rust at scribe, no blistering or undercutting
ASTM B117 Salt Fog (Defender Prime, PE-70, Indurethane 6600 Plus)	12,000 hrs no effect
ASTM D4541 Adhesion to Carbon Steel	2500 psi
ASTM D4541 Adhesion to Perma-Clean 100 topcoat	1900 psi at 30 day primer cure

**COMPATIBLE TOPCOATS**

AR40, AR45, AR50, AR55, AR56, AR57, AR58, AL70, EZ25.

**SURFACE PREPARATION**

All substrates clean and dry, free of dirt, oils, greases and contaminants

**SURFACE PREPARATION**

Carbon Steel	Abrasive blast to SSPC SP-6 with a 1-3 mil profile for atmospheric service, SSPC SP-10 for immersion (1-3 mil profile)
Concrete	Abrasive blast as per SSPC SP-13 to an ICRI CSP 3 or greater. Can be applied over Mortarchem and EFS 707
Repairs, small areas	SSPC SP-11 power tool to bare metal to produce an angular profile

**SHELF LIFE & STORAGE**

2 year shelf life parts A and B, Store long term between 35 and 90°F, Recommend heating material to 80-85°F in the 24 hours prior to application.

**DEFENDER****Defender Prime - Ceramic Epoxy Primer****TECHNICAL DATA SHEET****FILM THICKNESS**

	MINIMUM	MAXIMUM	COVERAGE RATE
Wet film	6 mils	12 mils	834 ft <sup>2</sup> /gal at 1 mil
Dry film	3 mils	6 mils	167 ft <sup>2</sup> /gal at 5 mils

**APPLICATION INSTRUCTIONS****Single Leg Airless Spray**

Remove all filters from spray system, use pump capable of 2,000 psi line pressure; 0.015-0.019 spray tip. Pre-heat material from 70-80°F prior to mixing and application.

**Plural Airless Spray**

Remove all filters from spray system, use Graco XP70 or equivalent heated plural spray unit with heated hose bundle and in-line static mixer. 0.015-0.019 spray tip. Heat A and B components to between 70 and 85°F and spray at minimum line pressure to achieve fan.

**Brush and Roll**

Thin as needed with Defender Reducer at up to 10%.

**MIX RATIO**

1:1 by volume A:B

**POT LIFE**

50°F	75°F	90°F
2.5 hours	4 hours	1 hour

**THINNING**

Up to 10% with Defender Reducer or K-1034

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All steel temperatures must be  $\geq 5^{\circ}\text{F}$  above the dewpoint, ambient temperatures  $\geq 50^{\circ}\text{F}$ .

	MINIMUM	MAXIMUM
Substrate temperature	50°F	140 °F
Material temperature	50°F	120°F
Humidity	0% RH	95% RH

CURE	50°	75°F	90°F
dry to handle	3 hrs	90 min	1 hr
dry to topcoat minimum	3 hrs	45 min	30 min
dry to topcoat maximum	1 year	1 year	1 year
cured for NSF 600 service	Heat to 75°F	7 days	7 days

**PHYSICAL PROPERTIES**

HAPS	1.13 lbs/gal
VOC	336 g/L
volume solids	52 $\pm$ 1%
weight solids	66 $\pm$ 1%