Defend 220™

TECHNICAL DATA SHEET

**This Technical Data Sheet supersedes those previously issued.*

DESCRIPTION

Defend 220™ is a one-coat hybrid, high solids Novolac tank lining which can be applied by single airless or plural component application with a return to service time in as little as 4 days. This lining is designed to be a replacement for two-coat epoxies.

TECHNICAL DATA

Color	Red, Grey	
Solids Content, %	93% by volume	
Finish	Semi-Gloss	
VOC's	As supplied Thinned to max level	Grey / Red 70 g/l (0.58 lb/gal) Grey / Red 109 g/l (0.91 lb/gal)
Pot Life	1 hour at 77°F (25°C)	



SUBSTRATE & SURFACE PREPARATION

General	Clean to remove all contaminants in accordance with SSPC-SP-1. Substrate must be clean and dry.
Steel Substrate	Abrasive blast clean to a minimum NACE No 2 / SSPC-SP 10 / ISO Sa 2½ with a 3.0 - 4.0 mil (76 - 102 micron) anchor profile that is sharp and angular for maximum adhesion.

MIXING & THINNING

Mixing	All coating kits are supplied at the proper mix ratio and should be mixed in their entirety. Mix Part A resin for approximately 2-3 minutes until color and consistency is uniform. Mix Part B catalyst until thoroughly homogeneous. Slowly add Part B catalyst to Part A and mix thoroughly for approximately 2 minutes.	
Ratio	Five gallon kit	Part A: 2.75 Gallons (10.5 liters) | Part B: 2.25 Gallons (8.5 liters)
Thinning	(if needed) Reduce with 0-5% (by volume) Toluene or Xylene	

APPLICATION GUIDELINES

Equipment Type

Coating should be applied via airless spray equipment, pump size 45:1 or greater, or by PC equipment at a 1.2:1 ratio.
***Contact APC Technical Service for additional information**

Dry Film Thickness

Average: 10-12 mils DFT (250-300 microns)
Minimum: 8 mils DFT (200 microns)
Maximum: 18 mils DFT (450 microns)

Theoretical Coverage

at 1 mil: 1492 ft^2 / gallon (25 microns)
at 10 mils: 149 ft^2 / gallon (250 microns)
at 12 mils: 124 ft^2 / gallon (300 microns)
at 14 mils: 106 ft^2 / gallon (350 microns)
*Allow for loss in mixing and application

at 1 mil: 36.6 m^2 / liter (25 microns)
at 10 mils: 3.6 m^2 / liter (250 microns)
at 12 mils: 3.0 m^2 / liter (300 microns)
at 14 mils: 2.6 m^2 / liter (350 microns)
*Allow for loss in mixing and application

Dry Times

Temperature	Dry to Touch (hours)	Dry Through (hours)	Dry to Service (days)
50ºF (10ºC)	12	14	5
68ºF (20ºC)	5	9	4
86ºF (30ºC)	2	5	4

Defend 220™ can be force air cured, or baked, at 175ºF (80ºC) for 1 hour.

APPLICATION CONDITIONS

Material

55ºF (13ºC) – 95ºF (35ºC)

Substrate

50ºF (10ºC) – 86ºF (30ºC)

Humidity

10% – 85%

CLEAN-UP & SAFETY

Clean-up

Defend 220™ can be cleaned up with MEK, Xylene, or Toluene.

Safety

Consult SDS

PACKAGING, HANDLING & STORAGE

Shelf Life

24 months

Storage

60ºF – 100ºF (15ºC - 37ºC) | 0 - 100% RH
Consult SDS or contact APC Technical Service for more info.

Information on TDS documents represent typical data for the mixed coating formulation (part A + part B) using 'as supplied' materials as of the date hereof. All information is correct to the best of our knowledge. Values should not be construed as specifications. Please contact Advanced Polymer Coatings' Technical Service Team if you have any questions related to this data sheet or application.

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