PPG Protective and Marine Coatings

PSX 700 SG, High Durability Epoxy Siloxane Topcoat

PRODUCT DESIGNATIONS

PSX 700 SG

MIL-PRF-24635

If this product is to be applied as part of a coating system, all components of the system must be as listed on the QPL.

This NAVSEA-REVIEWED ASTM F-718 data sheet is the only data sheet approved for use when utilizing this coating for U.S. Navy preservation projects. NAVSEA's review covers only the application process for the material. The review does not denote the material as a qualified product, nor does it constitute an approval for purchase/procurement of the material. For products on the Qualified Products List (QPL) for this MILSPEC, please refer to https://qpldocs.dla.mil/search/default.aspx.

Questions regarding modifications or updates of this ASTM F-718 shall be directed toward:

NSWCPD

NSWCPD_ASTM_F718.fct@navy.mil

SHIPBUILDERS AND MARINE PAINTS AND COATINGS PRODUCT/PROCEDURE DATA SHEET

I. GENERIC TYPE AND DESCRIPTION: High Durability Epoxy Siloxane Topcoat Date: 15 NOV 2022
Specification Number: MIL-PRF-24635
NOTE: For Type/Grade/Class/Application information see QPD-24635

II. MANUFACTURERS DATA:

(a) MANUFACTURER: PPG Protective and Marine Coatings

(b) PRODUCT DESIGNATION: PSX 700 SG

(c) COLOR(S): AMS-STD-595 Colors: Haze Gray 26270, Ocean Gray 26173, Light Gray 26373, Deck Gray 26008, Black 27038 per MIL-PRF-24635

(d) USES: Weatherable topcoat

(e) TECHNICAL SERVICE REPRESENTATIVE: James McCarthy (404) 580-8046 James.McCarthy@ppg.com

III. PROPERTIES:

(a) PERCENT VOLUME SOLIDS (ASTM D2697): 90 %

(b) PERCENT WEIGHT SOLIDS (ASTM D2369): 94 %

(c) FLASH POINT (ASTM D93):

Part A Resin : 207 °F (97 °C)

Part B Cure: 205 °F (96 °C)

Mixed: 206 °F (97 °C)

(d) WEIGHT PER VOLUME (ASTM D1475):

Part A Resin: 11.9 - 12.5 lb/gal (1425 - 1498 g/L)

Part B Cure: 7.63 - 8.23 lb/gal (914 – 986 g/L)

Mixed: 10.9 – 11.6 lb/gal (1306 – 1390 g/L)

(e) PERCENT EDGE RETENTION, IF REQUIRED BY APPLICABLE SPECIFICATION ( ): NA %

(f) SHELF LIFE: 24 Months

(g) VISCOSITY (ASTM D562):

Component A : 95-120 KU @ 21 °C (70 °F)

Component B : 50-60 KU @ 21 °C (70 °F)

Mixed : 70-90 KU @ 21 °C (70 °F)

(h) PACKAGING: 1-gallon kits (0.8 gal Part A + 0.2 gal Part B) and 5-gallon kits (4 gal Part A + 1 gal Part B)

(i) NUMBER OF COMPONENTS: 2

(j) GLOSS (ASTM D523): 50-65 GU

(k) STORAGE REQUIREMENTS: TEMPERATURE: 35 °F (2 °C) MIN. 95 °F (35 °C) MAX.

ADDITIONAL PAINT STORAGE REQUIREMENTS: Product temperatures must be 50°F – 90°F during mixing and application.

(l) VOLATILE ORGANIC COMPOUNDS (VOCS- EPA TEST METHOD 24): <1.25 lb/gal (150 g/L)

(m) WEIGHT PER AREA OF DRY FILM AT 1 MIL THICKNESS: 0.008 lb/sq. ft. (39.1 g/m²)

(n) SPECIAL PROPERTIES: Colors Haze Gray 26270, Ocean Gray 26173, Light Gray 26373, Deck Gray 26008 are Low Solar Absorbent (LSA). For color matching to color cards 26008, 26173, 26270, and 26373, refer to MIL-PRF-24635, paragraph 3.5.12.a.

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS:

(a) INITIAL CLEANLINESS: See specific primer, for aluminum, brush blast in accordance with SSPC-SP 16 requirements or throrough abrasive blast in accordance with SSPC-SP 17 requirements.

(b) TOUCH-UP CLEANLINESS: Over self: SSPC-SP 1. Over other coatings: Power or hand tool clean as per SSPC-SP 2, SP 3, or SP 11.

(c) PROFILE (ASTM D4417 Method B): 1.5 mils MIN. 3.5 mils MAX.

(d) SPECIAL INSTRUCTIONS: NA

(e) PRIMER REQUIREMENTS: Amercoat 235, Amercoat 240, Amercoat 385, Novaguard 810ER, MIL-DTL-24441 epoxies

(f) MAXIMUM ALLOWABLE CONDUCTIVITY (test method ISO 8502-9 and requirements via NSI 009-32):

30 µS /cm for immersed, 70 µS /cm for non-immersed areas.

(g) MAXIMUM DEGREE OF FLASH RUSTING ALLOWED: Refer to specific primer

SPECIAL SAFETY PRECAUTIONS:
NA

V. MIXING PROCEDURES

(a) MIXING RATIOS BY WEIGHT: 6.15:1
BY VOLUME: 4:1

(b) INDUCTION TIME: 0 Minutes

(c) RECOMMENDED CLEANING SOLVENT (NO THINNING ALLOWED): Amercoat 101 (Thinner 21-25), Amercoat 911 (Thinner 60-12), Amercoat 65 (Thinner 21-06)

(d) POT LIFE:

1.5 Hr(s) @ 90 °F (32 °C)
3.5 Hr(s) @ 70 °F (21 °C)
6.5 Hr(s) @ 40 °F (4 °C)

Graphs included on page: NA

(e) SPECIAL INSTRUCTIONS: NA

VI. APPLICATION:

(a) ENVIRONMENTAL LIMITATIONS:
SUBSTRATE TEMPERATURE: 40°F (4°C) MIN. 120°F (49°C) MAX.

AMBIENT TEMPERATURE: 40°F (4°C) MIN. 120°F (49°C) MAX.
DIFFERENCE ABOVE THE DEW POINT: 5 °F (3 °C)
MAXIMUM PERCENT RELATIVE HUMIDITY: 85 %

(b) FILM THICKNESS (SSPC PA2-73T): PER COAT:

6 mils WET MIN.	9 mils WET MAX.
5 mils DRY MIN.	8 mils DRY MAX.

TOTAL SYSTEM:

5 mils DRY MIN.	8 mils DRY MAX.

(c) DRY TIMES (ASTM D1640):

Minimum Overcoat Window:

20 Hr(s) @ 40 °F (4°C)
4.5 Hr(s) @ 70 °F (21°C)
3 Hr(s) @ 90 °F (32°C)

Maximum Overcoat Window:

Unlimited Hr(s) @ 40 °F (4°C)
Unlimited Hr(s) @ 70 °F (21°C)
Unlimited Hr(s) @ 90 °F (32°C)

Dry to Handle:

24 Hr(s) @ 40 °F (4°C)
6 Hr(s) @ 70 °F (21°C)
4 Hr(s) @ 90 °F (32°C)

Dry to Service:

24 Hr(s) @ 40 °F (4°C)
6 Hr(s) @ 70 °F (21°C)
4 Hr(s) @ 90 °F (32°C)

Graphs included on page 4 or additional information included on page 3 to 5.

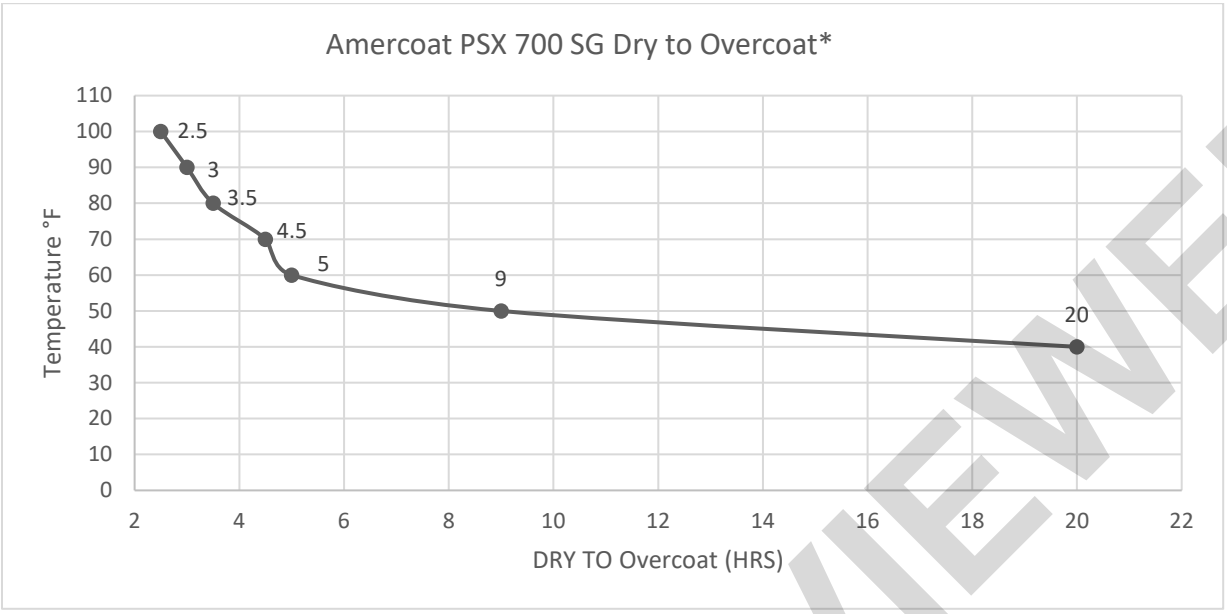
(d) EQUIPMENT REQUIREMENTS: Airless Spray: Standard airless pump to provide 1,800 - 2,500 psi with a 0.015" - 0.017" spray tip. Air Spray: Standard air spray equipment, pressure pot settings of 45-55 psi with moisture and oil traps, 0.070" fluid nozzle. Brush/Roller: Use a high quality bristle brush or well loaded 1/4" - 3/8" nap solvent resistant roller.

(e) SPECIAL INSTRUCTIONS: PSX 700 SG requires a minimum of 40% relative humidity for curing. Dry times are guidelines. Excessive film thickness, poor ventilation, and excessive humidity can cause deviation.

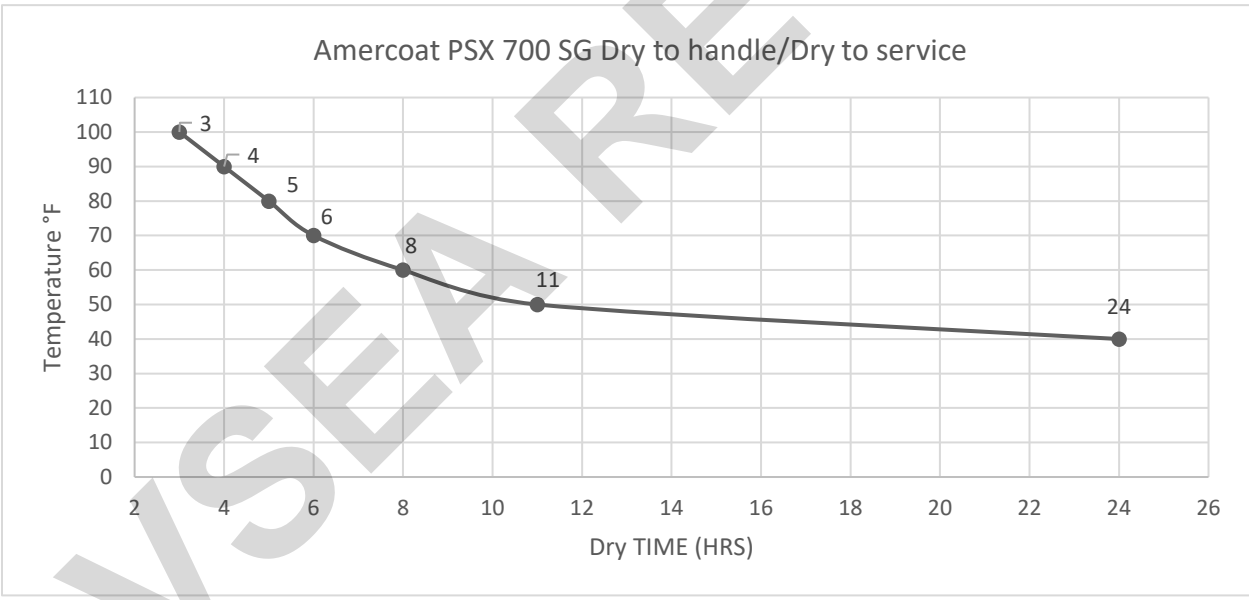
IF OVERCOAT WINDOW HAS BEEN EXCEEDED FOR CRITICAL APPLICATIONS: Coating surface should be clean and dry prior to re-application per SSPC-SP 1 requirements. Recommend using mild detergent solution followed by a fresh water rinse or Amercoat 911 (Thinner 90-58) for cleaning.

IF OVERCOAT WINDOW HAS BEEN EXCEEDED FOR NON-CRITICAL APPLICATIONS: Coating surface should be clean and dry prior to re-application per SSPC-SP 1 requirements. Recommend using mild detergent solution followed by a fresh water rinse or Amercoat 911 (Thinner 90-58) for cleaning.

GRAPHS FOR POT LIFE AND CURE TIMES:



*If overcoating within 7 days, solvent wipe the surface with any of the recommended PSX 700SG solvents prior to application of the next coat of PSX 700SG.



ADDITIONAL DATA/INSTRUCTIONS:

I. GENERIC TYPE AND DESCRIPTION: NA

II. MANUFACTURERS DATA: NA

III. PROPERTIES: NA

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS: NA

V. MIXING PROCEDURES: Mix for 3 minutes using a power mixer & mixing blade.

VI. APPLICATION: Adaquate ventilation must be maintained during application and curing. **
If overcoating within 7 days, solvent wipe the surface with any of the recommended PSX 700SG solvents prior to application of the next coat of PSX 700SG.