NAVSEA REVIEWED ASTM F-718

The Sherwin Williams Company

Sherwin-Williams Fast Clad Primer

PRODUCT DESIGNATIONS

Part A: B62L245 Blue OAP

Part B: B62V245 Clear

MIL-PRF-23236

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 http://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

CONTINUATION SHEET USED: ■ YES ☐ NO

Date: November 14, 2017 Rev.

I. GENERIC TYPE AND DESCRIPTION: Sherwin-Williams Fast Clad Primer

Specification Number: MIL-PRF-23236
NOTE: For Type/Grade/Class/Application information see QPL-23236

II. MANUFACTURERS DATA:

(a) MANUFACTURER: The Sherwin-Williams Company

(b) PRODUCT DESIGNATION: Part A: B62L245 Blue OAP Part B: B62V245 Clear

(c) COLOR(S): Blue OAP

(d) USES: Ballast tanks, fuel tanks, CHT, compensated fuel tanks, bilge, freeboard and topside anti-corrosive.

(e) TECHNICAL SERVICE REPRESENTATIVE: 1-877-877-7115 or your local Sherwin-Williams Representative

(f) NOT INTENDED FOR USE ON: Potable water tanks

III. PROPERTIES:

(a) PERCENT VOLUME SOLIDS (ASTM D2697): 98% ± 2%

(b) PERCENT WEIGHT SOLIDS (ASTM D2369): 98% ± 2%

(c) FLASH POINT (ASTM D93): 230ºF

(d) WEIGHT PER VOLUME (ASTM D1475): 12.0 ± 0.3 lbs per mixed gallon

(e) PERCENT EDGE RETENTION (MIL-PRF-23236 Appendix A): Not applicable for wetting primer

(f) SHELF LIFE: 24 months

(g) VISCOSITY (ASTM D562): COMPONENT A: 85-105 KU's (paste paddle)

COMPONENT B: 115-125 KU's (regular paddle)

MIXED: N/A due to short pot-life and thus continual viscosity change

(h) PACKAGING: 10 gallon kit. Component A and Component B each packaged in 5 gallon pails

(i) NUMBER OF COMPONENTS: 2

(j) GLOSS (ASTM D523): High gloss (>80)

(k) STORAGE REQUIREMENTS: TEMPERATURE: MIN. 40ºF MAX. 100ºF

ADDITIONAL PAINT STORAGE REQUIREMENTS: Protected indoor storage out of sun, rain, etc….

(l) VOLATILE ORGANIC COMPOUNDS (EPA TEST METHOD 24): < 85 g/L

(m) WEIGHT PER AREA OF DRY FILM AT 1 MIL THICKNESS: 0.0075 lbs per square foot per mil

(n) SPECIAL PROPERTIES: Rapid cure wetting primer ideal for heavily pitted steel.

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IV. SURFACE PREPARATION MINIMUM REQUIREMENTS:

(a) INITIAL: SSPC-SP 10 (Near White Metal Abrasive Blast) or SSPC-SP WJ-2 M /NACE WJ-2/M (UHPWJ Very Thorough Cleaning, Moderate Flash Rust) or SSPC-SP 10 (WAB) M/NACE WAB-2/M, (Near-White Metal Wet Abrasive Blast Cleaning, Moderate Flash Rust).

(b) TOUCH-UP: SSPC-SP 11 Power Tool Clean to Bare Metal areas requiring touch-up. Clean and abrade 1" to 2" of coating surface adjacent to touch-up areas with 80 grit sandpaper (or equivalent) to create tie-in and promote adhesion prior to recoating.

(c) PROFILE (ASTM D4417, Methods B or C): MIN. 2 mils MAX. 4 mils

(d) SPECIAL INSTRUCTIONS: 2 - 4 mil profile recommended, up to 5 mil profile acceptable.

(e) PRIMER REQUIREMENTS: Fast Clad Primer is to be used as the primer.

(f) MAXIMUM ALLOWABLE CONDUCTIVITY (Conductivity samples shall be collected using a product that meets the requirements of NACE SP0508-2010, "Methods of Validating Equivalence to ISO 8502-9 on Measurement of the Levels of Soluble Salts."):

For immersed areas maximum conductivity is 30 micro-siemens/cm. For non-immersed areas maximum conductivity is 70 micro-siemens/cm.

(g) MAXIMUM DEGREE OF FLASH RUSTING ALLOWED: Moderate as defined in SSPC-SP WJ-2 M /NACE WJ-2/M (UHPWJ Very Thorough Cleaning, Moderate Flash Rust) or SSPC-SP 10 (WAB) M/NACE WAB-2/M, (Near-White Metal Wet Abrasive Blast Cleaning, Moderate Flash Rust).

SPECIAL SAFETY PRECAUTIONS:

See Material Safety Data Sheet or Globally Harmonized System Safety Data Sheet

V. MIXING PROCEDURES:

(a) MIXING RATIOS BY WEIGHT: N/A
BY VOLUME: 1:1

(b) INDUCTION TIME: None

(c) RECOMMENDED CLEANING SOLVENT (NO THINNING ALLOWED): MAK, R6K10, or R7K104

(d) POT LIFE:

20 minutes @ 40°F
7 minutes @ 77°F
<4 minutes @ 110°F

(e) SPECIAL INSTRUCTIONS: Pot-life is 7 minutes at 77ºF. Mix contents of individual components thoroughly using power agitation. Make certain no pigments remain on the bottom or sides of the cans. When applied via plural component pump, final mixing will be performed in the static mixer. When using kits, mix thoroughly using power agitation and then use coating immediately ensuring the pot-life is not exceeded.

VI. APPLICATION:

(a) ENVIRONMENTAL LIMITATIONS:

SUBSTRATE TEMPERATURE: MIN. 35°F MAX. 110°F
AMBIENT TEMPERATURE: MIN. 35°F MAX. 110°F
MINIMUM SUBSTRATE TEMPERATURE DIFFERENCE ABOVE THE DEW POINT: 5°F
MAXIMUM PERCENT RELATIVE HUMIDITY: 85%

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

PER COAT:

WET MIN.	4 mils	WET MAX.	8 mils
DRY MIN.	4 mils	DRY MAX.	8 mils

TOTAL SYSTEM (for tanks)
One coat Fast Clad Primer to be topcoated with Fast Clad ER

DRY MIN.	20 mils	DRY MAX.	30 mils

(c) DRY TIMES (ASTM D1640):

Figure 1. Fast Clad Primer Minimum Cure to Touch Time

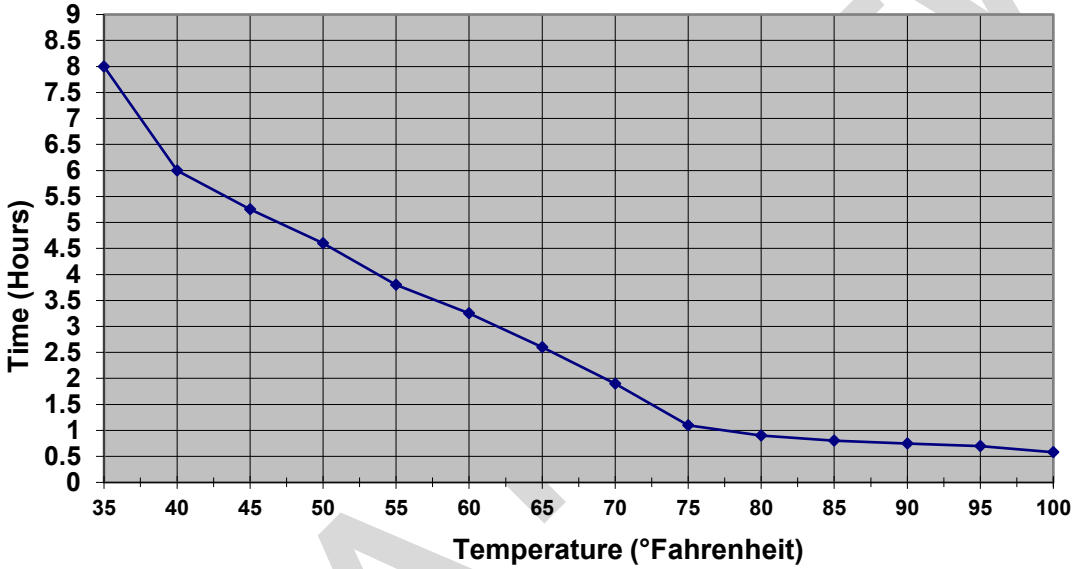


Figure 2. Fast Clad Primer Minimum Cure to Recoat Time

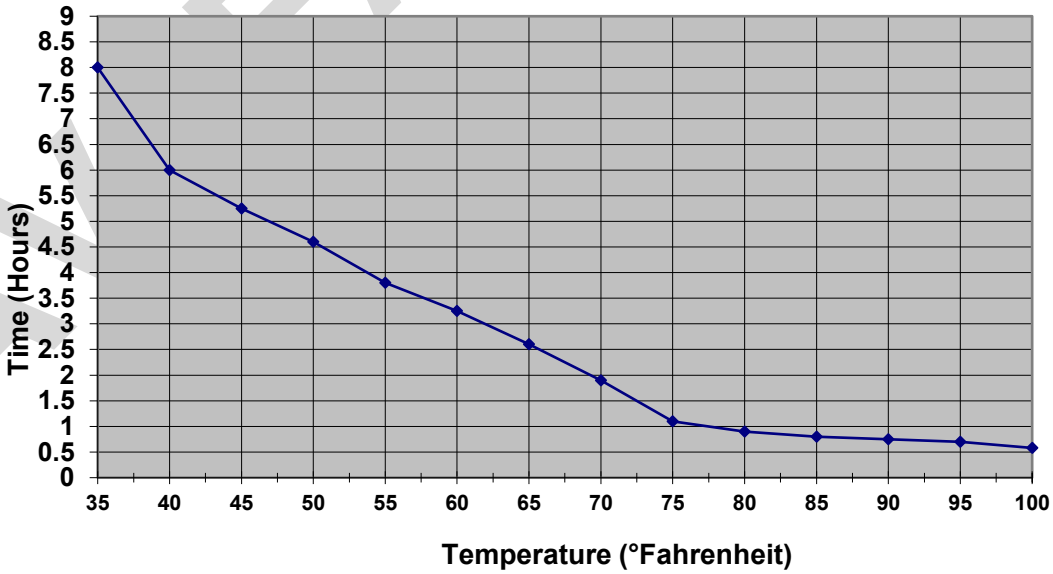


Figure 3. Fast Clad Primer Maximum Cure to Recoat Time

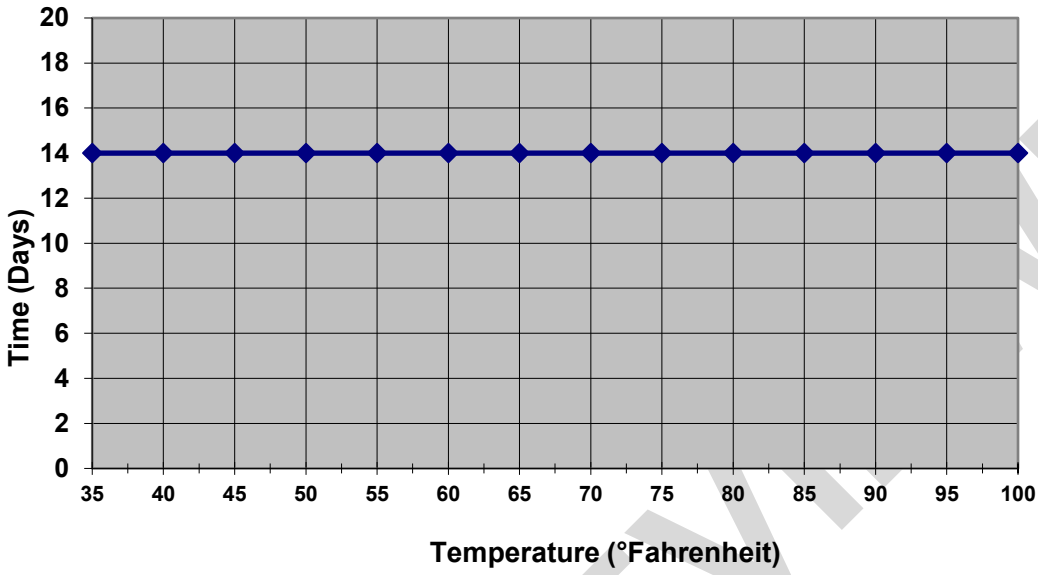
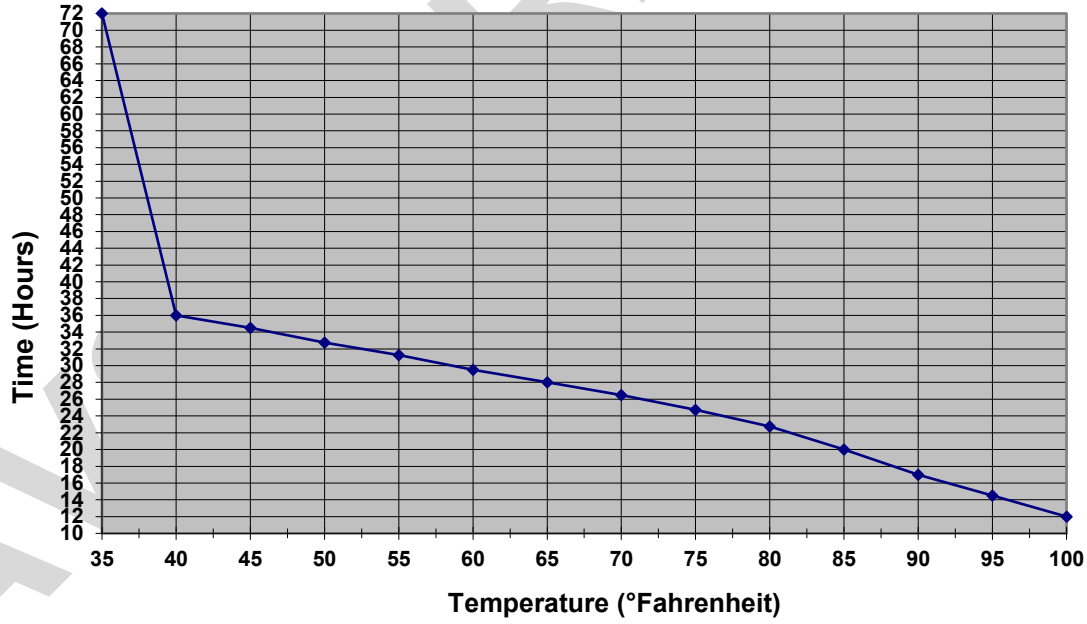


Figure 4. Fast Clad Primer Minimum Cure to Service Time



The above curing schedules are at 4.0 mils and 50% relative humidity.
Drying time is temperature, humidity, and film thickness dependent.
The above information is provided for guideline use only.

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(d) EQUIPMENT REQUIREMENTS: Heated plural component pump required for airless spray applications, not for touch-up. Heated lines are not required.

(e) SPECIAL INSTRUCTIONS:

Material recommended to be 95°F to 105°F at the gun for optimal application with a range of 85°F to 120° F acceptable based on tip size and pump pressure. Start at lower temperatures and raise temperature as necessary to achieve proper atomization. Do not exceed material temperatures of 130°F either at the gun or in the material hoppers. Excessive material temperatures will likely result in the coating setting and seizing the line/gun. Also, excessive material temperatures can potentially compromise adhesion of the coating to the substrate.

To ensure proper mixing of the two components, it recommended that material temperatures in the hoppers be maintained within 20°F relative to one another. For example, Part A material hopper temperature is 95°F. Part B material hopper temperature recommended to be between 75°F and 115°F.

IF OVERCOAT WINDOW HAS BEEN EXCEEDED FOR CRITICAL APPLICATIONS:

Clean surface of coating per SSPC-SP1 and allow surface to dry. Using 80 grit sandpaper or equivalent, aggressively abrade surface to promote adhesion. Clean surface of coating per SSPC-SP1 and allow to dry completely prior to applying next coat.

IF OVERCOAT WINDOW HAS BEEN EXCEEDED FOR NON-CRITICAL APPLICATIONS:

Clean surface of coating per SSPC-SP1 and allow surface to dry. Using 80 grit sandpaper or equivalent, aggressively abrade surface to promote adhesion. Clean surface of coating per SSPC-SP1 and allow to dry completely prior to applying next coat.

ADDITIONAL DATA/INSTRUCTIONS:

I. GENERIC TYPE AND DESCRIPTION:

II. MANUFACTURERS DATA:

III. PROPERTIES:

Note that viscosity is dependent upon temperature, type of measuring equipment, type of paddle or spindle, sample history, and test container size. Detailed test criteria available upon request.

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS:

V. MIXING PROCEDURES:

VI. APPLICATION:

For ballast, fuel, and CHT tanks note that Fast Clad Primer is qualified as a multiple coat system under Fast Clad ER (topcoat). Fast Clad Primer to be applied at 4 - 8 mils DFT. Fast Clad ER to be applied at 16 – 22 mils DFT for a system total of 20-30 mils.

When using the Fast Clad Primer Blue OAP, use Fast Clad ER non-OAP topcoat color to maximize inspection capabilities.

Sherwin-Williams ASTM F718 Addendum
*Use of CHLOR*RID Salt Remover*
January 24, 2018

Per 009-32 FY-18 CH-1 section 3.10.6.6 (and similarly noted in other FY versions of 009-32), the use of CHLOR*RID salt remover is authorized. Sherwin-Williams provides this document as an ASTM F718 addendum for the following Sherwin-Williams MIL-PRF-23236 qualified products:

Fast Clad ER
Fast Clad Primer
Fast Clad Brush Grade
SherPlate PW
DuraPlate UHS Primer
DuraPlate UHS
NovaPlate UHS Primer
NovaPlate UHS
EuroNavy ES301 Series
SeaGuard 5000 HS
DuraPlate 235
ExpressCote 150

When used in accordance with the manufacturers and the following instructions, Sherwin-Williams approves the use of CHLOR*RID, in conjunction with the above products, for U.S. Navy related projects:

1. CHLOR*RID is added to wash water at appropriate level per product recommendation.

2. After water washing with CHLOR*RID, allow substrate to fully dry. ALL treated substrate surfaces MUST be abrasive blasted to an SSPC-SP10 Near White Metal condition post CHLOR*RID application.

3. Failure to reblast all treated surfaces, regardless of their condition post CHLOR*RID application, voids these instructions and subsequent implied or direct warranties.

4. Accomplish surface conductivity checks as required per 009-32 after SSPC-SP10 Near White Metal reblast. Follow pass/fail criteria established in 009-32 including additional remedial steps as necessary.

5. Please see appropriate references in NAVSEA Standard Item 009-32.

Mark Schultz
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