The Sherwin-Williams Company

Dura-Plate 235 Multi-Purpose Epoxy

PRODUCT DESIGNATIONS

Dura-Plate 235 (B67HA235/B67VB235)

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

ASTM F 718

SHIPBUILDERS AND MARINE PAINTS AND COATINGS PRODUCT/PROCEDURE DATA SHEET

CONTINUATION SHEET USED: ☒ YES ☐ NO

Date: 01/12/11 Rev.

I. GENERIC TYPE AND DESCRIPTION: Multi-Purpose Epoxy
Specification Number, Type, Class and/or Grade (If Applicable): MIL-PRF-23236

II. MANUFACTURERS DATA:
(a) MANUFACTURER: The Sherwin-Williams Company

(b) PRODUCT DESIGNATION: Dura-Plate 235 (B67HA235/B67VB235)

(c) COLOR(S): Buff, black, haze gray, red oxide, mill white, and a wide range of colors approved by extension

(d) USES: Primer for ballast tanks, bilges, wet void areas

(e) TECHNICAL SERVICE REPRESENTATIVE
(Include Telephone Nos.): Customer Service Hotline (877) 877-7115

(f) NOT RECOMMENDED FOR: Fuel service, CHT tanks

III. PROPERTIES:
(a) % VOLUME SOLIDS (ASTM D 2697): 68% ± 2%

(b) % WEIGHT SOLIDS (ASTM D 1475): 79% ± 2%

(c) FLASH POINT (ASTM TEST METHOD D 93 OR D 56 OR D 3278): 116°F

(d) WEIGHT PER VOLUME: (FTMS 141a4184.1): 11.3 ± 0.2 lbs per gallon

(e) % EDGE RETENTION (IF REQUIRED BY APPLICABLE SPECIFICATION): N/A

(f) SHELF LIFE: 36 months

(g) VISCOSITY (STATE TEST METHOD TO BE USED): COMPONENT A: 90 KU minimum per ASTM D562

COMPONENT B: 65 to 165 cps per ASTM D2196

MIXED: Test components individually

(h) PACKAGING: Part A: 1 gallon, 4 gallons; Part B: 1 quart, 1 gallon

(i) NUMBER OF COMPONENTS: 2

(j) GLOSS (ASTM D 523): Semi-gloss (40 to 70% using 60° gloss meter)

(k) STORAGE REQUIREMENTS: TEMP. MIN. 40°F MAX. 100°F

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

(l) VOLATILE ORGANIC COMPOUND (EPA TEST METHOD 24): 272 g/L (2.3 lbs/gal)

(m) WEIGHT OF DRY FILM (WEIGHT/FT^2 AT 1 MIL THICKNESS): 0.0082 lbs/ft^2

(n) SPECIAL PROPERTIES (e.g., STAIN RESISTANCE, LOW SOLAR ABSORBANCE, MOISTURE TOLERANCE): Surface tolerance

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS (USE SPECIFIC STANDARD NUMBERS):
(a) INITIAL - SSPC-SP 10 Near White Blast for immersion, SSPC-SP 6 Commercial Blast for non-immersion

(b) TOUCH-UP - SSPC-SP 11 Power Tool Clean To Bare Metal. Clean and abrade surface prior to recoating.

(c) PROFILE (INCLUDE METHOD USED) - Profile: 2-4 mil profile recommended. No less than 1 mil or greater than 5 mils profile acceptable.

(d) SPECIAL INSTRUCTIONS – Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, and other foreign material to ensure good adhesion.

(e) PRIMER REQUIREMENTS (IF APPLICABLE): NA

(f) MAXIMUM ALLOWABLE CONDUCTIVITY (BRESLE PATCH METHOD): As per SSPC-SP 12/NV-2

(g) MAXIMUM DEGREE OF FLASH RUSTING ALLOWABLE (LIST COMMERCIAL STANDARD): SSPC-SP 12/WJ2M

SPECIAL SAFETY PRECAUTIONS:
REFER TO MATERIAL SAFETY DATA SHEET (MSDS)

V. MIXING PROCEDURES:

(a) MIXING RATIOS BY WEIGHT – N/A
BY VOLUME – 4:1

(b) INDUCTION TIME – 0°F 1 hour
40°F 30 minutes
77°F 15 minutes
120°F 5 minutes

(c) RECOMMENDED SOLVENT – THINNING – NO THINNING ALLLOWED
CONFINED AREAS - NO THINNING ALLOWED
NON-CONFINED AREAS - NO THINNING ALLOWED
CLEAN UP – R7K104

(d) THINNING REQUIREMENTS (RATIO) – NO THINNING ALLOWED

(e) POT LIFE – 16 hours at 0°F, 8 hours at 40°F, 4 hours at 77°F, 1 hour at 120°F

(f) SPECIAL INSTRUCTIONS – Mix contents of each component thoroughly using power agitation. Make certain no pigment remains on the bottom or the sides of the can. Combine four parts by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation.

VI. APPLICATION:

(a) ENVIRONMENTAL LIMITATIONS -

SUBSTRATE TEMPERATURE: MIN. 0°F MAX. 120°F

MINIMUM SUBSTRATE TEMPERATURE DIFFERENCE ABOVE THE DEW POINT: 5°F

RELATIVE HUMIDITY: 85% maximum

AMBIENT TEMPERATURE: MIN. 0°F MAX. 120°F

(b) FILM THICKNESS (SSPC-PA 2):

PER COAT:
WET MIN. 7.0 mils WET MAX. 9.0 mils

DRY MIN. 5.0 mils DRY MAX. 6.0 mils

TOTAL SYSTEM: (This is for the primer only)

DRY MIN. 5.0 mils DRY MAX. 6.0 mils

(c) DRY TIMES (ASTM D 1640) – See graphs on next pages.

(d) EQUIPMENT REQUIREMENTS (INCLUDE PREFERRED, SUITABLE, NOT SUITABLE REQUIREMENTS) - Airless, plural, or conventional spray. Brush (natural bristle/ nylon) or roller (3/8" woven with phenolic core).

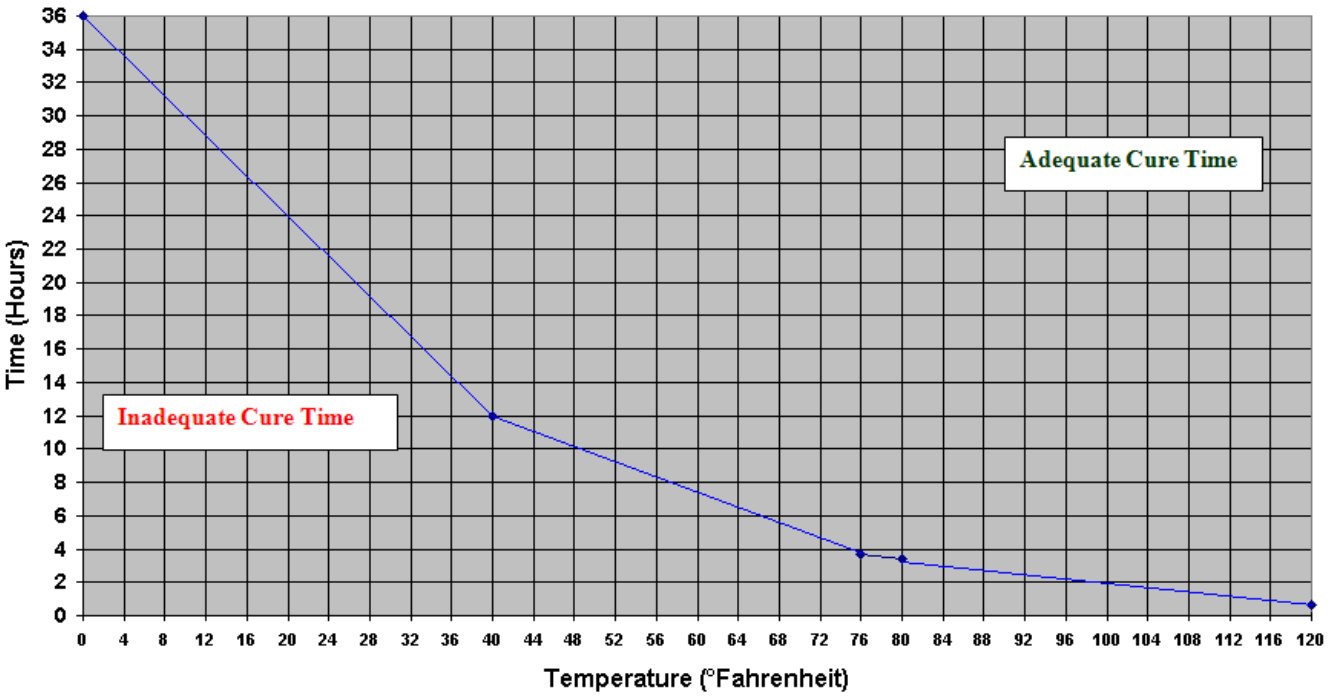
IF PLURAL COMPONENT EQUIPMENT IS REQUIRED, STATE SO – Not required

IF HEATED LINES ARE REQUIRED, STATE SO – Not required

(e) SPECIAL INSTRUCTIONS - Application of coating below minimum or above maximum recommended spreading rate may adversely affect coating performance. Ensure that substrate temperature is at least 5°F above the dew point prior to application. Dry times are normally a function of humidity. Ventilation and temperature information given is to be used as a guideline only.

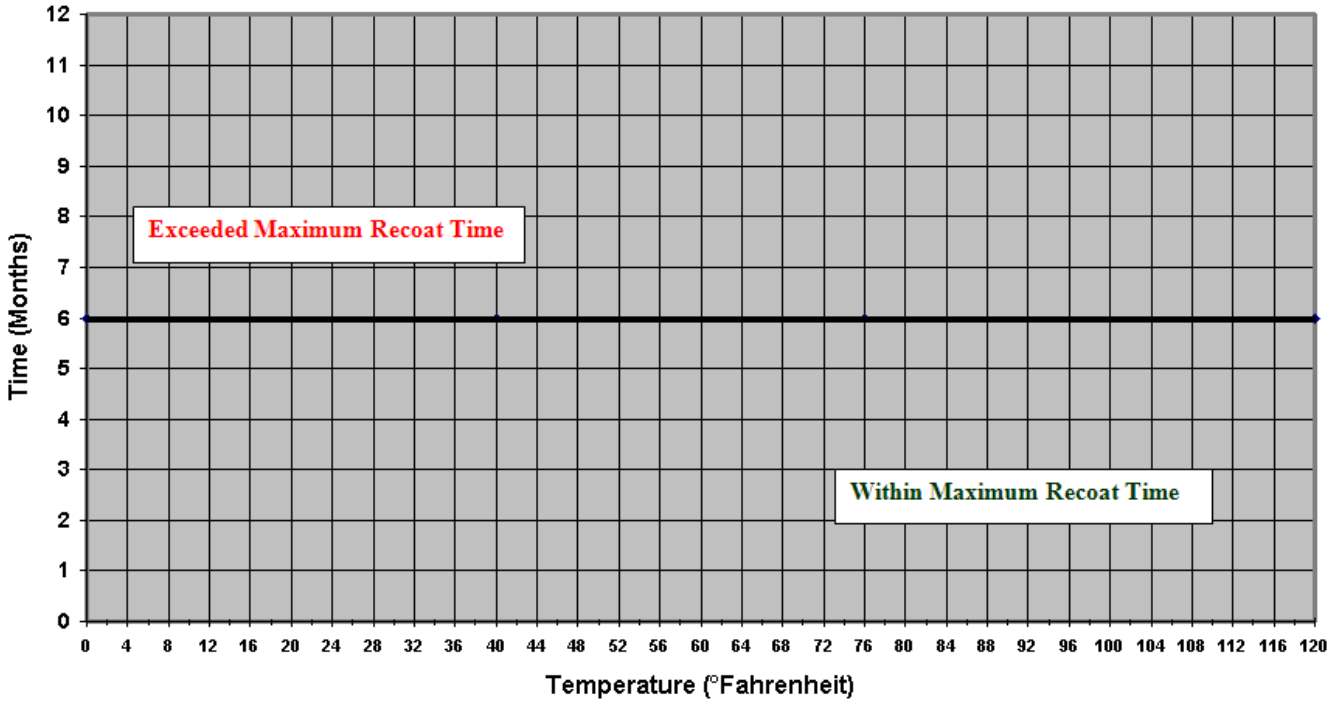
REPAIR PROCEDURES IF THE OVERCOAT WINDOW HAS BEEN EXCEEDED: SSPC-SP 1 surface of coating, aggressively abrade surface with 80 grit sandpaper or equivalent to promote adhesion, SSPC-SP 1 surface again.

Figure 1 & 2. Dura-Plate 235 Minimum Cure to Recoat & Handle Time



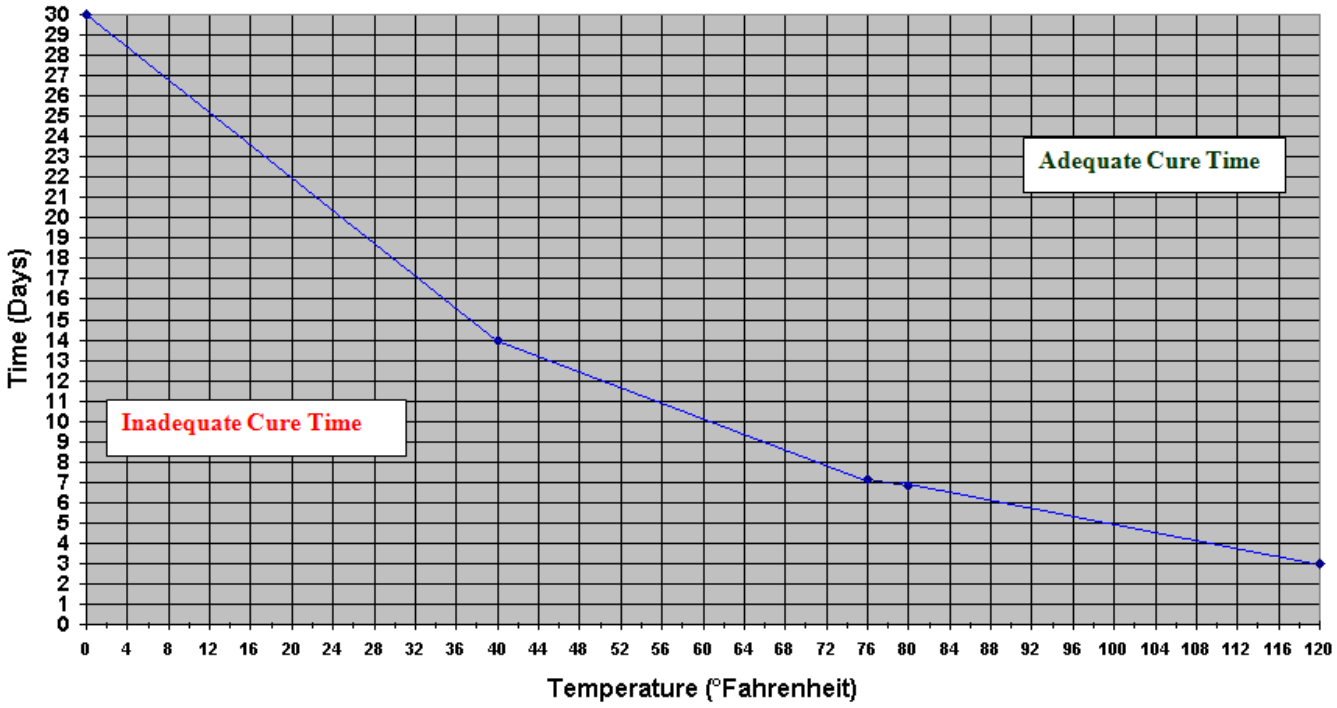
The above curing schedule is at 6.0 mils wet and 50% relative humidity./
Drying time is temperature, humidity, and film thickness dependent.
The above information is provided for guideline use only.

Figure 3. Dura-Plate 235 Maximum Cure to Recoat Time



The above curing schedule is at 6.0 mils wet and 50% relative humidity./
Drying time is temperature, humidity, and film thickness dependent.
The above information is provided for guideline use only.

Figure 4. Dura-Plate 235 Minimum Cure to Service Time



The above curing schedule is at 6.0 mils wet and 50% relative humidity.
Drying time is temperature, humidity, and film thickness dependent.
The above information is provided for guideline use only.

ASTM F 718 CONTINUATION SHEET FOR

SHIPBUILDERS AND MARINE PAINTS AND COATINGS PRODUCT/PROCEDURE DATA SHEET

Date 01/12/11 Rev.

I. GENERIC TYPE AND DESCRIPTION: Dura-Plate 235 Multi-Purpose Epoxy
Specification Number (If Applicable): MIL-PRF-23236

ADDITIONAL DATA/ INSTRUCTIONS:

II. MANUFACTURERS DATA:

ADD ADDITIONAL COMMENTS FROM PART II HERE

III. PROPERTIES:

ADD ADDITIONAL COMMENTS FROM PART III HERE

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS (USE SPECIFIC STANDARD NUMBERS):

ADD ADDITIONAL COMMENTS FROM PART IV HERE

V. MIXING PROCEDURES

ADD ADDITIONAL COMMENTS FROM PART V HERE

VI. APPLICATION REQUIREMENTS

ADD ADDITIONAL COMMENTS FROM PART VI HERE

WARRANTY DISCLAIMER: THE TECHNICAL DATA GIVEN HEREIN HAS BEEN COMPILED FOR THE ASSISTANCE OF THE USER AND GUIDANCE IS BASED ON THE EXPERIENCE AND KNOWLEDGE OF THE MANUFACTURER. HOWEVER, AS THE MANUFACTURER HAS NO CONTROL OVER THE USE OF THIS INFORMATION, NO WARRANTY, EXPRESSED OR IMPLIED, IS INTENDED OR GIVEN.

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
Government Marine Manager
Sherwin-Williams