NCP Coatings Inc.

DynaSpec 250, Enamel, Silicone Alkyd Copolymer

PRODUCT DESIGNATIONS

DynaSpec 250

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

I. GENERIC TYPE AND DESCRIPTION: Enamel, Silicone Alkyd Copolymer, Dynaspec 250 Date: 29 Apr 2020
Specification Number: MIL-PRF-24635 Revision E 15-Sept-09 and Revision E (I2) 12-Sept-18
NOTE: For Type/Grade/Class/Application information see QPD-Type II Class 1,2 & 3 Grade A, B & C

II. MANUFACTURERS DATA:

(a) MANUFACTURER: NCP Coatings Inc.

(b) PRODUCT DESIGNATION: DynaSpec 250

(c) COLOR(S): All

(d) USES: Interior and Exterior Enamel

(e) TECHNICAL SERVICE REPRESENTATIVE: Randy Terrill, NCP Coatings, 269-683-3377(office) randy@ncpcoatings.com

III. PROPERTIES:

(a) PERCENT VOLUME SOLIDS (ASTM D2697): 52-56 %

(b) PERCENT WEIGHT SOLIDS (ASTM D2369): 60-69 %

(c) FLASH POINT (ASTM D 3278):

Single Component: 107 °F (42 °C)

(d) WEIGHT PER VOLUME (ASTM D1475):

Single Component: 11-13 lbs/gl (1,318-1,558 g/L)

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

(f) SHELF LIFE: 24 Months

(g) VISCOSITY (ASTM D562):

Single Component : MAX 90 KU @ 35°C (75°F) Typically 75-85 KU

(h) PACKAGING: 1 gallon metal cans and five gallon metal pails

(i) NUMBER OF COMPONENTS: One

(j) GLOSS (ASTM D523): Class 1: 85 GU min Class II: 45-60 GU Class III: 7-12 GU

(k) STORAGE REQUIREMENTS: TEMPERATURE: 40 °F (4 °C) MIN. 90 °F (32 °C) MAX.

ADDITIONAL PAINT STORAGE REQUIREMENTS: Store at 50 degrees – 90 degrees for 24 hours prior to application

(l) VOLATILE ORGANIC COMPOUNDS (VOCS- EPA TEST METHOD 24): <2.1 lb/gal (<250 g/L)

(m) WEIGHT PER AREA OF DRY FILM AT 1 MIL THICKNESS: 0.009 lb/sq. ft. (43.9 g/m²)

(n) SPECIAL PROPERTIES:HAPS Free

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS:

(a) INITIAL CLEANLINESS: Apply over properly cleaned and primed surfaces.

(b) TOUCH-UP CLEANLINESS: Ensure the area is clean and dry. Light sand any areas that have dried more than 24 hours before recoating to ensure good adhesion.

(c) PROFILE (N/A): N/A mils MIN. N/A mils MAX.

(d) SPECIAL INSTRUCTIONS: Mix coating thoroughly before application. Surface preparation is key to the coating's adhesion, appearance, and longevity. With that in mind, please adhere to the following steps when painting over aged coatings. 1. Clean entire surfaces to be coated with fresh water and allow to completely dry. 2. Sand all surfaces to be coated with 80-100 grit aluminum oxide paper, either manually or with orbital sanders. 3. Wipe away sanding residue with damp clean rags. 4. After masking where appropriate, apply the paint via brush and roller (3/8" nap preferable). Apply at 2-3 mils WFT. This equates to a rate of approximately 320 sq ft/gallon. 5. Remove masking the next day. 6. Note – Do not apply in thick fog or impending marine layer, coating may cure cloudy and not to a nice semi-gloss sheen.

(e) PRIMER REQUIREMENTS: Prime with NCP MIL-DTL-24441, Seaguard 5000, Interbond 998 or other approval NAVSEA primer. Light sanding and solvent wipe may be needed if the primer has dried more than 48 hours. Refer to primer ASTM F718 for additional information.

(f) MAXIMUM ALLOWABLE CONDUCTIVITY (NACE SP0508-2010):

Maximum allowable conductivity is 70 microsiemens/cm. Maximum allowable chlorides is 5 micrograms/cm² (50 mg/m²).

(g) MAXIMUM DEGREE OF FLASH RUSTING ALLOWED: Per NAVSEA Standard Item 009-32, limit square footage of surface being prepped to avoid flash rust or meet applicable NACE/SSPC WJ-2L Standard. Refer to primer ASTM F718 for additional information.

SPECIAL SAFETY PRECAUTIONS:
Avoid extreme heat – Keep away from flame or other ignition sources.

V. MIXING PROCEDURES

(a) MIXING RATIOS BY WEIGHT: NA – Single-Component (1K)
BY VOLUME: NA – Single-Component (1K)

(b) INDUCTION TIME: Single Component (1K) NA Minutes

(c) RECOMMENDED CLEANING SOLVENT (NO THINNING ALLOWED): (NO THINNING ALLOWED) CONFINED AREAS – no thinning allowed non-confined areas – no thinning allowed CLEAN UP – 1) Methyl Amyl Ketone (MAK)

(d) POT LIFE: A slight skin may begin to form after 45 min. to 1 hr. in a roller pan at 90+degrees F. A skin will eventually form on material in the can if the lid remains open when not in use.

NA Hr(s) @ NA °F (NA °C)

Graphs included on page: N/A

(e) SPECIAL INSTRUCTIONS: Mix for a minimum of 5 minutes or until coating is uniform, no hardener required. This is a single component (1K) paint that does not require a hardener.

VI. APPLICATION:

(a) ENVIRONMENTAL LIMITATIONS:

SUBSTRATE TEMPERATURE: 50°F (10°C) MIN. 120°F (49°C) MAX.
AMBIENT TEMPERATURE: 50°F (10°C) MIN. 105°F (41°C) MAX.
DIFFERENCE ABOVE THE DEW POINT: 5 °F (3 °C)
MAXIMUM PERCENT RELATIVE HUMIDITY: 80 %

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

2.0 mils WET MIN. 3.0 mils WET MAX.
1.2 mils DRY MIN. 1.8 mils DRY MAX.

TOTAL SYSTEM:

Varies depending on application 1.2 mils DRY MIN.
3.6 mils DRY MAX.

(c) DRY TIMES (ASTM D1640):

Minimum Overcoat Window:

60 Hr(s) @ 50 °F (10°C)
24 Hr(s) @ 75 °F (24°C)
8 Hr(s) @ 95 °F (24°C)

Maximum Overcoat Window:

NA Hr(s) @ 50 °F (10°C)
NA Hr(s) @ 75 °F (24°C)
NA Hr(s) @ 95 °F (35°C)

Dry to Handle:

48 Hr(s) @ 50 °F (10°C)
8 Hr(s) @ 75 °F (24°C)
3 Hr(s) @ 95 °F (35°C)

Dry to Service:

48 Hr(s) @ 50 °F (10°C)
8 Hr(s) @ 75 °F (24°C)
3 Hr(s) @ 95 °F (35°C)

Graphs included on page 4 or additional information included on page 4

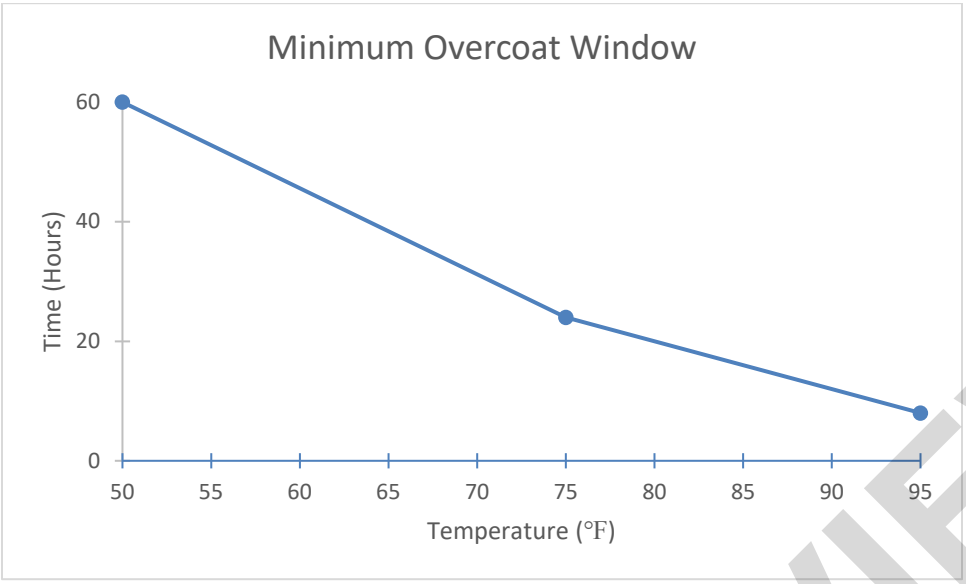
(d) EQUIPMENT REQUIREMENTS: Product is designed to be applied by brush, roller or spray. All application equipment must be clean prior to use.

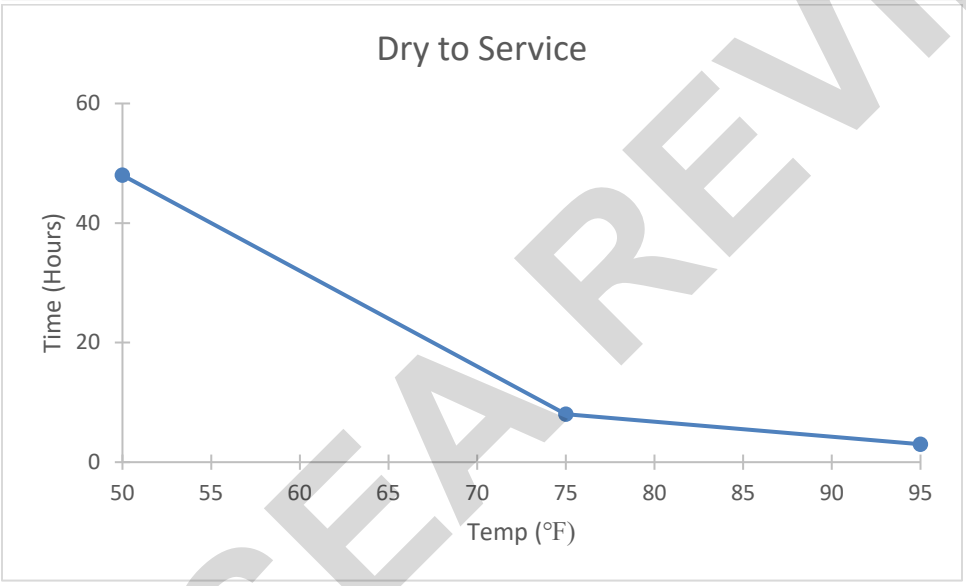
(e) SPECIAL INSTRUCTIONS: None

IF OVERCOAT WINDOW HAS BEEN EXCEEDED FOR CRITICAL APPLICATIONS: NA

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

GRAPHS FOR POT LIFE AND CURE TIMES:





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: NA

VI. APPLICATION: NA