NCP Coatings LLC

SiloxoShield Single-Component (1K) Polysiloxane

PRODUCT DESIGNATIONS

Single-Component Polysiloxane Topside Coating

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 at NavseaReviewedf718@us.navy.mil.

SHIPBUILDERS AND MARINE PAINTS AND COATINGS PRODUCT/PROCEDURE DATA SHEET

I. GENERIC TYPE AND DESCRIPTION: Single-Component PolysiloxaneTopside Coating Date: 12/05/2023
Specification Number: MIL-PRF-24635 Type V, Composition 1
NOTE: For Type/Grade/Class/Application information see QPD-QPL-24635

II. MANUFACTURERS DATA:

(a) MANUFACTURER: NCP Coatings LLC

(b) PRODUCT DESIGNATION: SiloxoShield Single-Component (1K) Polysiloxane

(c) COLOR(S): NAVSEA colors haze gray (#26270), deck gray (#26008), ocean gray (#26173), and light gray (#26373) defined per MIL-PRF-24635F. For NCP codes of colors listed in MIL-PRF-24635, see page 5.

(d) USES: Topside or Freeboard Use. Approved as a Color Topping as listed on qualified nonskid systems under QPL-24667.

(e) TECHNICAL SERVICE REPRESENTATIVE: Rob Holzapfel, (rob@ncpcoatings.com), (269)-683-3377

III. PROPERTIES:

(a) PERCENT VOLUME SOLIDS (ASTM D2697): 58+/-5 %

(b) PERCENT WEIGHT SOLIDS (ASTM D2369): 62+/-5 %

(c) FLASH POINT (106°F (41°C)):

(d) WEIGHT PER VOLUME (ASTM D1475):

Single Component: 10.3+/- 1.0 lb/gal (1232 g/L)

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

(f) SHELF LIFE: 24 Months

(g) VISCOSITY (ASTM D562):

Single Component : 85-95 KU @ 25 °C (77 °F)

(h) PACKAGING: Provided in 1-gallon metal cans and 5-gallon metal pails

(i) NUMBER OF COMPONENTS: Single Component

(j) GLOSS (ASTM D523): High Gloss: 85+ GU, Semigloss: 45-60 GU, Low Gloss: 7-12 GU

(k) STORAGE REQUIREMENTS: TEMPERATURE: 40 °F (4 °C) MIN. 105 °F (41 °C) MAX.

ADDITIONAL PAINT STORAGE REQUIREMENTS: Store at 50-90 degrees F 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: 0.0069 lb/sq. ft. (33.7 g/m²)

(n) SPECIAL PROPERTIES:Exterior Color Stability, Low-Solar Absorbing (LSA), HAPs-free. Complies with Navy TSR and Enhanced Pigment requirements.

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS:

(a) INITIAL CLEANLINESS: Apply over properly cleaned and primed surfaces. See primer ASTM F-718 for further guidance.

(b) TOUCH-UP CLEANLINESS: Ensure the area is clean, oil free and dry. Light sand any areas that have dried more than 24 hours before recoating to ensure good adhesion per SSPC-SP 2, or SP 3, followed by a solvent wipe to remove any residual dust per SSPC-SP 1.

(c) PROFILE (Refer to appropriate manufacturer's ASTM F718 for Primer Requirements): 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 N-9999 via brush and roller (3/8" nap preferable).
5.Apply at 2-3 mils WFT. This equates to a rate of approximately 320 ft²/gallon.
6. Remove masking the next day.
Note - Do not apply in thick fog or impending marine layer, as coating may cure cloudy and not to a nice semi-gloss sheen..

(e) PRIMER REQUIREMENTS: Prime with MIL-DTL-24441, Seaguard 5000HS, Intergard 264, Intershield 300HS, Interbond 998, Hempadur 17630, Hempadur 17633 or other MIL-PRF-24647 or MIL-PRF-23236 qualified primers. Light sanding and solvent wipe may be needed if the primer has dried for more than 48 hours. Refer to applicable primer ASTM F718 for additional information.

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

Maximum allowable conductivity is 70 micro siemens/cm. Maximum allowable chloride is 5 micrograms/cm² (50 mg/m²).

(g) MAXIMUM DEGREE OF FLASH RUSTING ALLOWED: Refer to primer ASTM F718 for additional information.

SPECIAL SAFETY PRECAUTIONS:
Refer to Manufacturers SDS. Avoid extreme heat – keep away from flame or other ignition sources.

V. MIXING PROCEDURES

(a) MIXING RATIOS BY WEIGHT: N/A – Single-Component (1K)
BY VOLUME: N/A – Single-Component (1K)

(b) INDUCTION TIME: N/A – Single-Component (1K) Minutes

(c) RECOMMENDED CLEANING SOLVENT (NO THINNING ALLOWED): Methyl Amyl Ketone (MAK) or Light Aromatic Naptha

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

N/A Hours @ N/A °F (N/A °C)

Graphs included on page: N/A Single Component no stated pot-life see notes above

(e) SPECIAL INSTRUCTIONS: Mix for a minimum of 3-minutes or until coating is uniform utilizing a power mixer and mixing blade. NO HARDENER (PART B) REQUIRED

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 (-15 °C)
MAXIMUM PERCENT RELATIVE HUMIDITY: 80%
MINIMUM PERCENT RELATIVE HUMIDITY: 30 %

(b) FILM THICKNESS (SSPC PA2-73T): PER COAT:
2-3 mils WET MIN. 6 mils WET MAX.
1.2-1.8 mils DRY MIN. 3.6 mils DRY MAX.
TOTAL SYSTEM:
3.0 mils DRY MIN. 7.0 mils DRY MAX.

(c) DRY TIMES (ASTM D1640):

Minimum Overcoat Window:

24 Hours @ 50 °F (10°C)
7 Hours @ 75 °F (24°C)
5 Hours @ 120 °F (49°C)

Maximum Overcoat Window:

72 Hours @ 50 °F (10°C)
24 Hours @ 75 °F (24°C)
12 Hours @ 120 °F (49°C)

Dry to Handle:

16 Hours @ 50 °F (10°C)
10 Hours @ 75 °F (24°C)
6 Hours @ 120 °F (49°C)

Dry to Service:

8 Days @ 50 °F (10°C)
6 Days @ 75 °F (24°C)
2 Days @ 120 °F (49°C)

Graphs included on page 4 or additional information included on page N/A

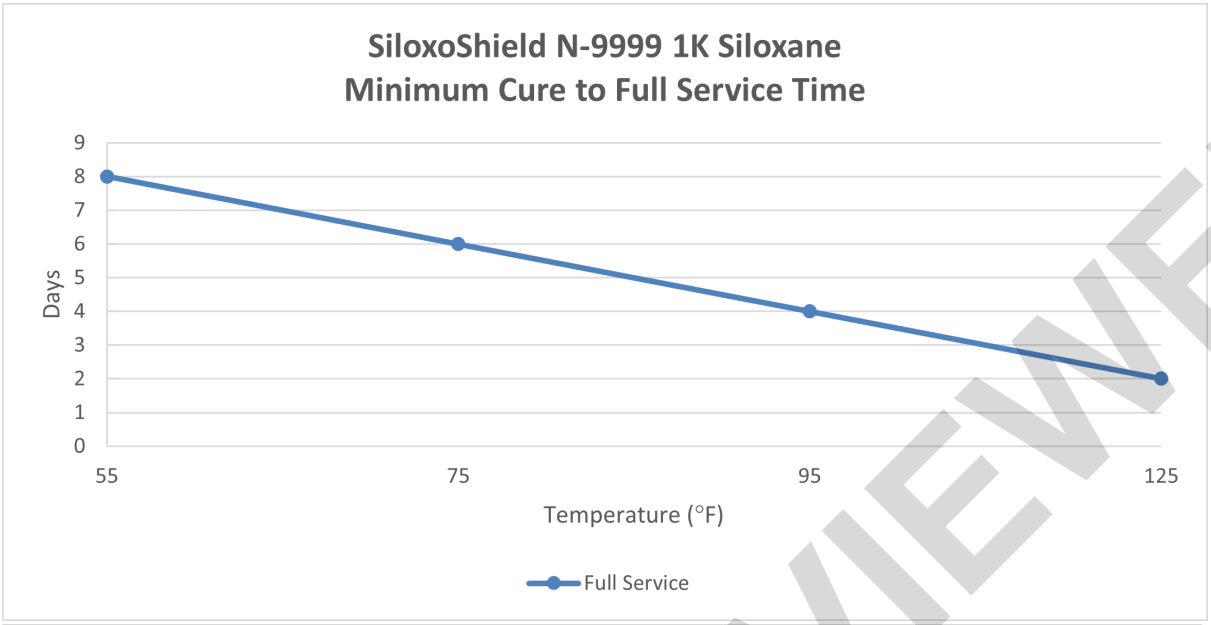
(d) EQUIPMENT REQUIREMENTS: Coating can be applied using standard airless, pressure spray, brush and or roll application. For roll application use a 3/8" or ¼" nap roller. For airless spray applications a 0.017"-0.019" tip is recommended. For pressure spray a 1.8-2.0mm needle is recommended. Adjust to air pressure as required to achieve the desired spray pattern.

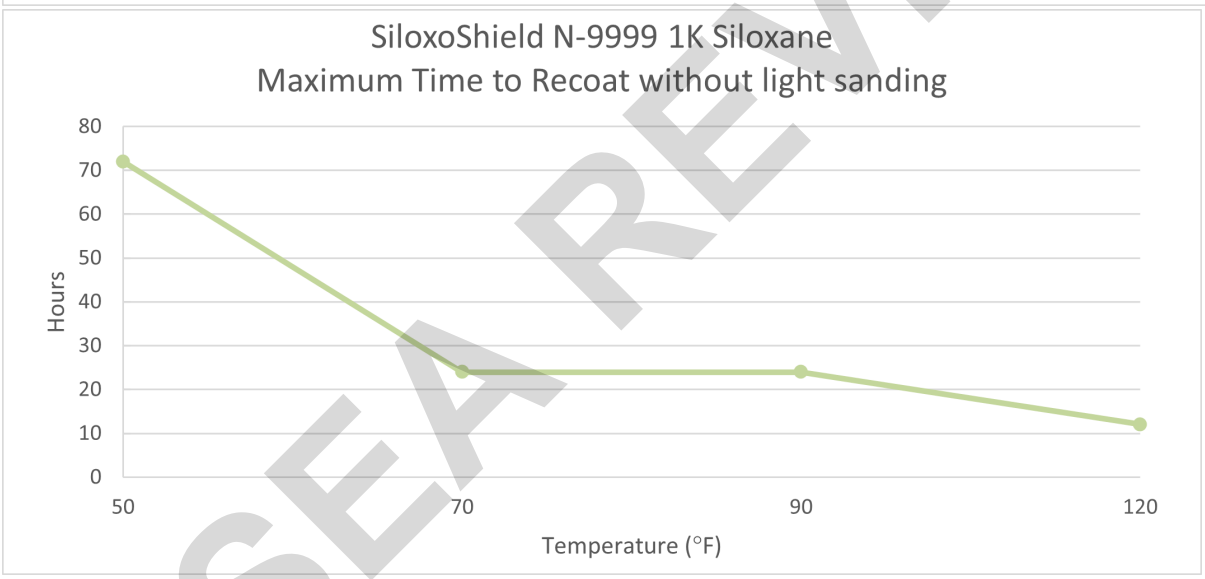
(e) SPECIAL INSTRUCTIONS: Do not apply when humidity is less than 30% or great than 80%. Do not apply when metal temperature is under 50° or over 120°F. At time of application, in accordance with NAVSEA Standard Item 009-32, material temperature should be no lower than 50°F or higher than 90°F. Caution should be taken that the surface temperature is at least 5°F above the dew point at application.

IF OVERCOAT WINDOW HAS BEEN EXCEEDED FOR CRITICAL APPLICATIONS: Light sand any areas that have dried more than 24 hours before recoating to ensure good adhesion per SSPC-SP 2, or SP 3, followed by a solvent wipe to remove any residual dust per SSPC-SP 1.

IF OVERCOAT WINDOW HAS BEEN EXCEEDED FOR NON-CRITICAL APPLICATIONS: Light sand any areas that have dried more than 24 hours before recoating to ensure good adhesion per SSPC-SP 2, or SP3 , followed by a solvent wipe to remove any residual dust per SSPC-SP 1.

GRAPHS FOR POT LIFE AND CURE TIMES:





ADDITIONAL DATA/INSTRUCTIONS:

I. GENERIC TYPE AND DESCRIPTION: N/A

II. MANUFACTURERS DATA: N/A

III. PROPERTIES: N/A

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS: N/A

V. MIXING PROCEDURES: Upon opening of the container a tint-float may be noted, this is normal. Mix product for a minimum of 3-minutes using a power mixer and mixing blade until a uniform color and homogenous nature is obtained.

VI. APPLICATION: N/A

Additional Colors	595#	NCP Code	Grade
Haze Gray	26270	N-9999	B
Red	11105	S-10272	A
Red	11136	S-10573	A
Yellow	13538	S-10273	A
Gold	17043	S-10274	A
Brown	10080	S-10275	A
Tan	10324	S-10276	A
Buff	10371	S-10277	A
Orange	12246	S-10278	A
Yellow	13591	S-10700	A
Dark Green	14062	S-10279	A
Light Green	14449	S-10280	A
Dark Blue	15044	S-10281	A
Blue	15123	S-10282	A
Blue	15182	S-10283	A
Light Blue	15200	S-10284	A
Dark Gray	16081	S-10285	A
Gray	16187	S-10286	A
Light Gray	16376	S-10287	A
(equipment)Beige	16405	S-10575	A
Green-gray	16555	S-10288	A
Black	17038	S-10289	A
Dark Purple	17100	S-10290	A
Light Purple	17142	S-10291	A
Soft White	17886	S-10292	A
White	17875	S-10394	A
White	17925	S-10562	A
Chartreuse	23814	S-10293	A
Yellow	23655	S-10720	A
Deck Gray	26008	N-10044	B
Deck Gray	26076	S-10170	A
Ocean Gray	26173	S-10194	B
Gray	26307	S-10366	A
Light Gray	26373	S-10195	B
Black	27038	S-10294	A
White	27875	S-10295	A
Off White	27886	S-10457	A
White	27925	S-10566	A
Yellow	33655	S-10587	A
Black	37038	S-10173	A