NAVSEA REVIEWED ASTM F-718

Holcim Products and Solutions US LLC / American Safety Technologies

MS-200, Two component, acrylic epoxy color topping

PRODUCT DESIGNATION

Part A: MS209R Dk. Gray / MS207R Green / MS205R Red / MS201R White / MS203R Yellow

Part B: MS218H

MIL-PRF-24667

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: Two component, acrylic epoxy color topping Date: 2/21/2025
Specification Number: MIL-PRF-24667
NOTE: For Type/Grade/Class/Application information see QPD-24667

II. MANUFACTURERS DATA:

(a) MANUFACTURER: Holcim Products and Solutions US LLC / American Safety Technologies, 12055 Cutten Road, Houston, TX 77066

(b) PRODUCT DESIGNATION: MS-200 Part A: MS209R Dk. Gray / MS207R Green / MS205R Red / MS201R White / MS203R Yellow/ MS-200 Part B: MS218H. Coatings are sold in kit form, designated with "K" suffix which contain both Part A and Part B (i.e., MS209K Dk Gray kit, MS207K Green kit, MS205K Red kit, MS201K White kit, MS203K Yellow kit)

(c) COLOR(S): Dark Gray, Green, Red, White, Yellow

(d) USES: Nonskid VLA Markings, Borders, Aircraft Secure Fittings, and areas not to receive a nonskid overcoat.

(e) TECHNICAL SERVICE REPRESENTATIVE: : 800-878-7876, Fax: 972-554-3939, Email: holcimacs.orders1@holcim.com, web site:www.holcimast.com

III. PROPERTIES:

(a) PERCENT VOLUME SOLIDS (ASTM D2697): White 54+/-2%, Other colors 56+/-2 %

(b) PERCENT WEIGHT SOLIDS (ASTM D2369): White 69%+/-2, Other colors 66+/-2 %

(c) FLASH POINT (ASTM D3276):

Part A: >102 °F (39 °C)

Part B: >105 °F (40 °C)

(d) WEIGHT PER VOLUME (ASTM D1475):

Component A (White): 10.6 lb/gal (1270 g/L)

Component A (Yellow): 9.9 lb/gal (1186 g/L)

Component A (All other colors) : 9.4 lb/gal (1162 g/L)

Component B: 8.0 lb/gal (958 g/L)

Mixed (White) : 10.3 lb/gal (1258 g/L)

Mixed (Yellow): 9.7 lb/gal (1162 g/L)

Mixed (All other colors): 9.2 lb/gal (1114 g/L)

(e) PERCENT EDGE RETENTION, IF REQUIRED BY APPLICABLE SPECIFICATION (Click here to enter text): N/A %

(f) SHELF LIFE: 12 Months

(g) VISCOSITY (ASTM D2196):

Part A : ~1600 cps @ 70 °C (21 °F)

Part B : ~60 cps @ 70 °C (21 °F)

Mixed : 1500 cps @ 70 °C (21 °F)

(h) PACKAGING: Part A: 4.35 gallons in 6 ½ gallon pail, Part B: 0.56 gallon in a 1-gallon bag

(i) NUMBER OF COMPONENTS: 2

(j) GLOSS (ASTM D523): Flat to Gloss based on color GU

(k) STORAGE REQUIREMENTS: TEMPERATURE: 40 °F (4.4 °C) MIN. 100 °F (37.7 °C) MAX.

ADDITIONAL PAINT STORAGE REQUIREMENTS: 24 HOURS PRIOR TO MIX: TEMP. MIN. 50˚F (10°C) MAX. 90˚F(32.2°F)

(l) VOLATILE ORGANIC COMPOUNDS (VOCS- EPA TEST METHOD 24): White 3.3 lbs/gal, other colors 3.2 lb/gal (White 395 g/L, other colors 383 g/L)

(m) WEIGHT PER AREA OF DRY FILM AT 1 MIL THICKNESS: 0.008 lb/sq. ft. (3.5 g/m²)

(n) SPECIAL PROPERTIES:N/A

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS:

(a) INITIAL CLEANLINESS: Remove grease, oil and dirt per SSPC-SP1 or other approved method.

(b) TOUCH-UP CLEANLINESS: Ensure surface is clean and free from dirt, oil, grease, and all other containments.

(c) PROFILE (N/A): Click here to enter text mils MIN. Click here to enter text mils MAX.

(d) SPECIAL INSTRUCTIONS: N/A

(e) PRIMER REQUIREMENTS: MS-7CZ, MS-8CZ or MS11CZ

(f) MAXIMUM ALLOWABLE CONDUCTIVITY (Click here to enter text):

N/A

(g) MAXIMUM DEGREE OF FLASH RUSTING ALLOWED: N/A

SPECIAL SAFETY PRECAUTIONS:

CAUTIONS TO BE TAKEN IN HANDLING AND STORING: WARNING! IRRITANT, Read MSDS before use. Do not get in eyes,avoid contact with skin and clothing, and avoid inhalation of vapor or mist. Use with adequate ventilation, wash thoroughly afterhandling and before eating, drinking or smoking. Remove contaminated clothing and wash before use. OTHER PRECAUTIONS:Avoid extreme heat – keep away from flame or other ignition source.

V. MIXING PROCEDURES

(a) MIXING RATIOS BY WEIGHT: White 10.3:1, Yellow 9.7:1, all other colors 9.4:1 (Part A to Part B)
BY VOLUME: White 7.6:1, Yellow 7.7:1, all other colors 7.8:1 (Part A to Part B)

(b) INDUCTION TIME: 30 Minutes

(c) RECOMMENDED CLEANING SOLVENT (NO THINNING ALLOWED): – CLEAN UP: S-31 Solvent, S-426 Solvent, Isopropyl Alcohol, Aromatic Naphtha, MAK

(d) POT LIFE:Click here to enter text

4 Hours @ 90 °F (32.2 °C)

6 Hours @ 70 °F (21 °C)
8 Hours @ 50 °F (10 °C)

Graphs included on page: 5

(e) SPECIAL INSTRUCTIONS: Premix Part A (base component) to ensure all materials which may have settled during storage are lifted from the bottom. Using a clean mixing paddle and adequate mechanical mixer, mix Part A and Part B components together for a minimum of 3 minutes or until the mixed material assumes a uniform color and appearance. Warning-Improperly mixed material will not cure properly.

VI. APPLICATION:

(a) ENVIRONMENTAL LIMITATIONS:

SUBSTRATE TEMPERATURE: 50°F (10°C) MIN. 120°F (48.9°C) MAX.
AMBIENT TEMPERATURE: 50°F (10°C) MIN. 100°F (37.8°C) MAX.
DIFFERENCE ABOVE THE DEW POINT: 5 °F (2.8 °C)
MAXIMUM PERCENT RELATIVE HUMIDITY: 85 %

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

3 mils WET MIN. 5 mils WET MAX.
1.6 mils DRY MIN. 2.7 mils DRY MAX.

TOTAL SYSTEM:

2.8 mils DRY MIN. 3.8 mils DRY MAX.

(c) DRY TIMES (ASTM D1640):

Minimum Overcoat Window:

24 Hours @ 50 °F (10°C)
6 Hours @ 70 °F (21°C)
3 Hours @ 90 °F (32.2°C)

Maximum Overcoat Window:

28 Days @ 50 °F (10°C)
14 Days @ 70 °F (21°C)
7 Days @ 90 °F (32.2°C)

Dry to Handle:

30 Hours @ 50 °F (10°C)
12 Hours @ 70 °F (21°C)
6 Hours @ 90 °F (32.2°C)

Dry to Service:

14 Days @ 50 °F (10°C)
7 Days @ 70 °F (21°C)
3 Days @ 90 °F (32.2°C)

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

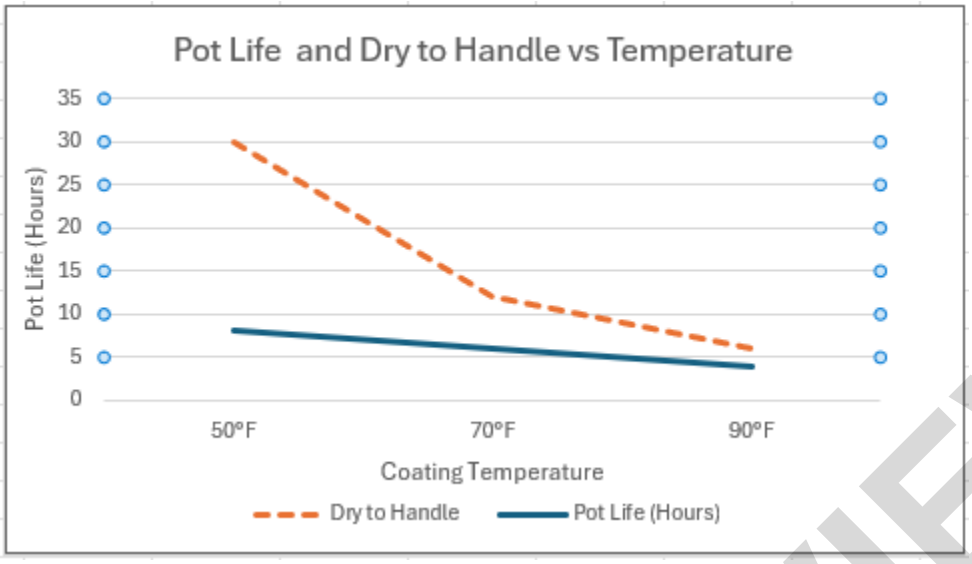
(d) EQUIPMENT REQUIREMENTS: Roller – Use a short nap mohair roller, apply uniformly. Brush – Use a 4” wide thin stock brush. Spray – Conventional, air spray, or airless spray equipment can be used. For spray applications, use Graco #800 gun with a fluid tip of 0.70 mm. Keep fluid pressure low, about 15 PSI. Excessive pressure can cause overspray problems. For Airless applications, a Graco 30:1 Bulldog or 35:1 Senator is recommended. Tip sizes from 0.17 to 0.19 inch will provide a good spray pattern. Fluid hoses should be less than 3/8” ID with a maximum of 50 feet, not including short ¼” ID whip hoses. Larger diameter hoses should be used with larger fluid lines. Long fluid lines with narrow ID.fluid hoses will reduce fluid pressure at the gun, causing a poor spray.pattern.

(e) SPECIAL INSTRUCTIONS: Caution should be taken to avoid excessive film buildup. If a second coat of color topping is required, the film thickness of that coat should be planned and executed toward the minimum end of that acceptable range to avoid excessive buildup. Note: For every 10˚F temperature increase the time of cure is reduced by 30% (0.3X) and conversely each decreases of 10˚F increases the cure time by 30% (1.3X). Do not apply MS-200 Color Topping when surface is under 50˚F or over 120˚F. The temperature must be at least 5°F above the dew point during application. Temperatures below 50˚F should not be considered in the cure time calculations for MS-200. Note: Changes in environmental conditions (post application) are affected by day/night cure temperatures and exposure to sun light. Recorded temperature data will assist in determining an approximate creditable cure.

IF OVERCOAT WINDOW HAS BEEN EXCEEDED FOR CRITICAL APPLICATIONS: This includes zone tie-in areas where the primer is to be overcoated with itself (up to 12 inches), borders, aircraft securing fitting,deck edge coaming, drains and fixtures. If less than 7 days has elapsed since the application of the primer coat, perform a complete cleaning by solvent wipe down of the primed area to be overcoated. After day 7 and up to day 30, if the next coat has not been applied, the entire surface shall be cleaned in accordance with SSPC-SP1. Ensure the surface has fully dried following solvent cleaning, and then lightly abrade with abrasive blast, power sanding, or hand sanding using 80-120 grit. Perform a solvent re-clean of the abraded surface and allow any visible traces of solvent to fully evaporate. After solvent cleaning (ensuring surfaces have completely dried and all solvent has evaporated) and after visual inspection confirms the absence of surface contaminates, a proprietary primer or color topping may be applied.

IF OVERCOAT WINDOW HAS BEEN EXCEEDED FOR NON-CRITICAL APPLICATIONS: If less than 7 days has elapsed since the application of the primer coat, perform a complete cleaning by solvent wipe down of the primed area to be overcoated. After solvent cleaning (ensuring surfaces have completely dried and all solvent has evaporated), and after visual inspection confirms the absence of surface contaminants, a proprietary primer, nonskid or color topping may be applied. After day 7 and up to day 30, if the next coat has not been applied, the entire surface shall be cleaned in accordance with SSPC-SP1. Beyond 30 days, ensure that the surface has fully dried following solvent cleaning and then lightly abrade with abrasive blast, power sanding or by hand sanding using 80-120 grit. Perform a solvent re-clean of the abraded surface and allow any visible traces of solvent to fully evaporate. Apply a tack coat (2-3 mils/ 50-75 microns WFT) of proprietary primer. Minimum overcoat dry times for application of a “tack coat” applied to a primer coat shall be those indicated within the Dry Time table in section VI (c) of the applicable proprietary primer.

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: N/A

VI. APPLICATION: N/A