NAVAL SEA SYSTEMS COMMAND
What’s New in NAVSEA Coatings?

NSRP SPC Panel Meeting
Via Conference Call
March 2021

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Distribution A: Approved for Public Release
OBJECTIVES

• Summarize evolving Naval Sea Systems Command (NAVSEA) organization and coating requirements:
  • Headquarters NAVSEA organization & objectives.

• Summarize what's new in NAVSEA nonskid and maintenance coating cost reduction strategies:
  • Publication of updated Standard Item 009-32.
  • Publication of significant update to the MIL-PRF-24667 conventional nonskid specification.
  • Publishing updated interior coating and decking specifications in process.
  • Publishing update to the TT-C-492 anti-sweat coating specification.
  • In-service demonstration of spray applied polysiloxane nonskid.

• Summarize challenges regarding recent listing of Oxsol 100 on California Proposition 65 list of carcinogens.
NAVSEA Strategic Business Plan

NAVSEA Strategic Business Plan 2018-2022, has three key mission priorities:
1. On-Time Delivery of Ships and Submarines.
2. Culture of Affordability.
3. Cybersecurity.

NAVSEA addresses these items through continual, ongoing interactions with shipbuilding and ship repair community:
What’s new with Standard Item 009-32?

- Published FY-22, Change 1, Standard Item 009-32 on 21 Feb 2021 that includes relatively few technical and editorial changes.
  
  - No SSRAC meeting in 2020 so all changes based on Technical Authority.
  
  - All changes based on questions from SRF-JRMC and other field activities.
  
  - All changes vetted through HQ-NAVSEA (SEA 04X, SEA 05D, SEA 05P, SEA 05V, SEA 05U).

1. CREATED REQUIREMENTS FOR PCMS TILE INSTALLATION ON ALUMINUM, STEEL, AND GRP SUBSTRATES.
   
   Previously: PCMS tile citations from Table 5 did not mention specific substrate material. Surface preparation requirements were for steel.

   Added: New Lines in Table 2 for PCMS installation:
   Steel Substrate – Lines 45 -52
   Aluminum Substrate – Lines 75 -82 (cites new SSPC-SP 17)
   GRP Substrate – Line 86

SEA 05P2 validated new PCMS requirements with applicable HQ-NAVSEA codes.
2. CLARIFIED PARAGRAPH 3.7 REGARDING UNCOATED (OILED) TANKS.
Previously: The paragraph 3.7 table of Critical Coated Areas included Note (65) that exempts ship’s fuel tanks from coating requirement.
Removed: Note (65) from the paragraph 3.7 table to avoid confusion about whether or not uncoated tanks are Critical Coated Areas.

3. CLARIFIED THAT EMBARKED BOATS ARE TO USE GRAY ANTIFOULING.
Previously: Paragraph 3.1.22 requires embarked boats and craft to satisfy camouflage requirements, but Table 1, Line 19 invokes black coatings for embarked boats.
Modified: Table 1, Line 19 to require last coat of antifouling to be “gray” or as approved by the Supervisor. Note that a tradename “gray” antifouling was removed from Standard Item 009-32 in 2010.

Updates address concerns raised by SERMC and ensure consistency with other requirements.
4. COMBINED LINES FOR TECHNICALLY SIMILAR CONDENSATION CONTROL COATINGS.
   Previously: Table 5 Lines 3 and Line 5 both call out coatings that absorb moisture.
   Combined: Table 5, Lines 3 and 5 into one line.

5. CREATED NEW REQUIREMENTS FOR COATING VEHICLE RAMPS AND VEHICLE STORAGE DECKS.
   Previously: Table 2 had no requirements for interior nonskid surfaces on ramps and vehicle decks.
   Created: New Table 2, Lines 20 and 20A for interior vehicle ramps and vehicle storage deck nonskids that require:
   MIL-PRF-24667, Type I and Type V, Composition D flight deck nonskid for use on interior of LHA, LHD, LSD, and LPD.
   New Note (83) that states:
   Nonskid on vehicle ramps must be rolled perpendicular to main axis of the ramp.
   Welds must not be cross-rolled on vehicle ramps.

Updates address concerns raised by maintenance community without major policy changes.
6. CLARIFIED TERMS IN NOTE (10A).
   Previously: Note (10A) used the term "qualified" that is not applicable to the cited MIL-DTL-24607 specification because it is a “First Article” document with no QPL.
   Removed: Eliminated the term “qualified” from Note (10A).

7. CLARIFIED REQUIREMENTS FOR PREPARING WOOD SURFACES.
   Previously: Table 2, Line 69 directed sanding without defining a sandpaper grit size.
   Added: Note (71) to Table 2, Line 87, Column A to require workers to use 80-120 grit sandpaper to prepare wood surfaces.

8. CLARIFIED REQUIREMENTS FOR SINGLE PACK POLYSILOXANE SYSTEM PRIMERS.
   Previously: Table 2, Line 1 requires two coats of solvent-based epoxy primer at 4 – 8 mils DFT, one stripe coat, and then one coat of either:
   Composition 1 (i.e., single pack polysiloxane) at 2 – 3 mils DFT
   - or –
   Composition 2 (i.e., two pack polysiloxane) at 5 – 8 mils DFT.
   Created: New Table 2, Line 1 that deletes the second coat of solvent-based epoxy under the Composition 2 (i.e., two pack polysiloxane) at 5 – 8 mils DFT, and a new Line 1a that retains the two coats of primer under the Composition 1 (i.e., single pack polysiloxane) at 2 – 3 mils DFT.

9. EDITORIAL. Eliminated the Table 6, Line 1, Column B has a double comma between “TYPE IV" and "4 - 6 MILS".

Updates address concerns raised by NAVSEA and public without major policy changes.
Leadership Challenge
Improve Overall Nonskid Performance

- Mar 2017 – Senior NAVSEA / NAVAIR leadership task Flight Deck Readiness Working Group (FDRWG) to improve all aspects of flight deck nonskid service life. FDRWG includes:
  - SEA 05P2, NSWC-PD, NRL
  - SEA 21
  - Fleet Forces
  - NAVAIR technical community
  - Type Commander
  - USMC Aviation

- Nonskid must consistently achieve required service life while satisfying all MIL-PRF-24667C performance requirements.

Flight Deck Readiness Working Group tasked to improve nonskid service life and performance on all platforms.
# Published MIL-PRF-24667D Specification Update

Utilize Type, Composition, Class, Application, and Grade to Define Nonskid

## Baseline Requirements

- ID characteristics
- impact resistance#
- flash point
- resistance to chemical solutions
- color
- condition in container
- pot life#
- fire resistance
- storage stability (accelerated and long-term)
- VOC content#
- HAP content
- metals content
- crystalline silica content
- toxicity
- directions for mixing and applying
- performance in-service#

## Proposed MIL-PRF-24667D Classification

<table>
<thead>
<tr>
<th>Type</th>
<th>Composition</th>
<th>Class</th>
<th>Grade</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Standard durability, roll application (1)(2)(4)</td>
<td>Standard</td>
<td>One component</td>
<td>Standard cure</td>
</tr>
<tr>
<td>G</td>
<td>General use abrasive [Comp G]</td>
<td>Color stable (15)</td>
<td>Two component</td>
<td>Fast cure (22)</td>
</tr>
<tr>
<td>X</td>
<td>Limited use abrasive [Comp L]</td>
<td>Low solar absorbent (16)</td>
<td></td>
<td>Low temperature cure (22)</td>
</tr>
<tr>
<td>V</td>
<td>Extended durability, roll application (1)(3)^2(3)</td>
<td>Resilient (9)(17)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extended durability, spray application (4)(8)(10)(11)</td>
<td>Submerged Application (18)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Distinguishing Requirements

1. resistance to wear
2. resistance to accelerated aging by light and water
3. resistance to accelerated corrosion
4. coefficient of friction*
5. appearance of dried coating
6. application properties
7. coverage
8. weight
9. flexibility
10. immersion resistance
11. cathodic protection compatibility
12. aggregate density
13. aggregate hardness
14. abrasion of arresting cable
15. color stability*
16. solar reflectance*
17. adhesion of the intermediate coat
18. pressure cycling
19. resistance*
20. low profile*
21. drying time

* indicates new, or significantly modified
^ indicates alternate criteria

MIL-PRF-24667, Type XI Peel & Stick, now MIL-PRF-24667C, and to become MIL-PRF-XX642 Type VIII

14 May 2018
Published MIL-PRF-24667D Specification Update
Utilize Type, Composition, Class, Application, and Grade to Define Nonskid

• MIL-PRF-24667D update published on 16 Feb 2021 and appeared in ASSIST on 8 Mar 2021. Update intended to provide requirements for nonskids to better satisfy Fleet customer needs including:

  Types – Where and how the nonskid is installed (i.e., roller and spray options).

  Compositions – What aggregate is in the nonskid.

  Classes – Unique features or performance requirements.

  Grades – Number of components in the nonskid.

  Application – Temperatures at which the nonskid is installed.

1. Types – Eliminated five types and consolidated to distinguish between rollable vs. sprayable, standard vs. extended durability, and topside vs. submerged
   • I – Standard durability, rollable deck coating
   • II – Standard durability, sprayable deck coating
   • III – Submerged applications, rollable
   • IV – Submerged applications, sprayable
   • V – Extended durability, rollable deck coating
   • VI – Extended durability, sprayable deck coating

2. Compositions – No change
   • D – Density-controlled abrasive deck system
   • G – General use abrasive deck system
   • L – Limited use aircraft carrier landing and run-out area deck system that is less abrasive to the steel arresting cable

This specification is approved for use by the Naval Sea Systems Command and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE
   1.1 Scope. This specification covers nonskid systems, coatings, and coverings for application to weather decks, flight decks, and hangar decks of aircraft carriers, surface combatants, and amphibious, auxiliary, and naval ship ships, and submarines. Coatings are applied to steel, aluminum, and special hull treatment surfaces by spraying, rolling, or other application methods as designated by the manufacturer of the nonskid system.

   1.2 Classification. The nonskid systems covered by this specification are of the following types, compositions, classes, grades, and applications, as specified (see 8.2).

   1.2.1 Types. The types of nonskid systems are as follows:
      a. Type I – Standard durability, rollable
      b. Type II – Standard durability, sprayable
      c. Type III – Submerged applications, rollable
      d. Type IV – Submerged applications, sprayable
      e. Type V – Extended durability, rollable
      f. Type VI – Extended durability, sprayable

   1.2.2 Compositions. The compositions of nonskid systems are dependent on aggregate use and are categorized as follows:
      a. Composition D – Density-controlled abrasive deck system
      b. Composition G – General use abrasive deck system
      c. Composition L – Limited use aircraft carrier landing and run-out area deck system that is less abrasive to the steel arresting cable

   1.2.3 Classes. The classes of nonskid systems are separated by functionality as follows:
      a. Class I – Standard
Published MIL-PRF-24667D Specification Update
Utilize Type, Composition, Class, Application, and Grade to Define Nonskid

3. Classes – new category to identify various functionality
   • 1 – Standard
   • 2 – Color stable
   • 3 – Low solar absorbent
   • 4 – Resilient (for use where flexibility is required)
   • 5 – Elastomeric substrate for submerged applications
   • 6 – Low profile
   • 7 – High Temperature

4. Grades – new category to identify number of components
   • A – Single component coating
   • B – Two component coating

5. Applications – new category to identify cure characteristics
   • 1 – Standard cure
   • 2 – Fast cure, temporary repair
   • 3 – Low temperature

Note: MIL-PRF-24667D update intended to eliminate less durable nonskidos. The current MIL-PRF-24667C, Type II nonskid specified for exterior walk areas to be replaced by MIL-PRF-24667D, Type I (roller applied) or Type II (spray applied) flight deck nonskidos.

Nonskid manufacturers contacted via SEA 05P2 e-mail on 10 Mar 2021 that requested requalification requests.
NEW METHOD: MIL-PRF-24667D nonskid specification requires flight deck nonskid Coefficient of Friction (CoF) to be measured when a nonskid is qualified using current sliding block for static CoF and new μ-deck rotating ball devise for dynamic CoF:

- CoF measured between NAVSEA standard rubber ball (NAVSEA DWG NO. 8418020) based on aircraft tire rubber composition and nonskid surface.
- Rotating ball method measures consistent, dynamic CoF over 360 degrees in one measurement.
- Based on commercial pin-on-disk approach.
- Commercially available unit under tradename μ-Deck from Vision Point Systems since 2008

● CoF testing to be conducted during material qualification:

<table>
<thead>
<tr>
<th>TABLE III</th>
<th>Static CoF</th>
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<tbody>
<tr>
<td></td>
<td>Minimum value</td>
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<tr>
<td></td>
<td>Dry</td>
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<tr>
<td>Conditioned</td>
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</tr>
<tr>
<td>Types 1 through VI</td>
<td>0.95</td>
</tr>
<tr>
<td>Worn</td>
<td></td>
</tr>
<tr>
<td>Types 1 through VI</td>
<td>0.90</td>
</tr>
</tbody>
</table>

Paragraph 3.4.2 μ-Deck Dynamic CoF

Dry: 1.4

Wet: 1.1

No requirement to validate as-applied nonskid CoF.

SYSTEM IMPROVEMENTS: Automated, portable, reproducible data across broad temperature range.

- Affordable using COTS parts design.
- Automated calibration (may need plate standards and strain gage validation).

NAVSEA transitioning new rotating ball technology to standard practice in MIL-PRF-24667D but need fleet input.
μ-Deck discriminates between acceptable and unacceptable CoF more clearly than sliding block.

In the graph:
- The equation $y = 0.6252x + 0.7297$ with $R^2 = 0.085$ is shown.
- MIL-PRF-24667C lower (dry) limit of 20% reduction in CoF after one year service.
- 20% reduction in in-service TSN CoF (dry) due to wear in MIL-PRF-24667D 1.4 dry requirement.

Distribution A Approve for Public Release
Published MIL-PRF-24667D Specification Update
Shipboard Qualification of Composition D Nonskid

- MIL-PRF-24667C currently requires all nonskid materials to be qualified on a CVN flight deck.

**Composition G – MIL-PRF-24667C**

a. Wear-through showing the primer or steel deck;
b. ASTM D660 checking rated less than 8;
c. ASTM D661 cracking rated less than 8
d. Breaking (flaking);
e. Loss of adhesion (peeling);
f. COF values less than 80 percent of the initial value;
g. Other deficiency which would adversely affect its performance.

**Composition D – MIL-PRF-24667D**

- FLIGHT DECK NONSKID QUALIFICATION ON LHA/LHD
- Retained current a.-g. performance criteria.
- Maintained Composition D density requirements.
- Added new cyclic heat resistance requirements.
- Modified service test to 18 months.

Nonskid materials experience different challenges on CVN and LHA/LHD and QPD must reflect all ship classes.
Published MIL-PRF-24667 Specification Update
Heat Resistance

- Add performance tests for heat resistant nonskids. Current epoxy nonskid coatings are not designed to survive heat from exhaust gas impingement on deck.

  - FY-18, Change 1, Standard Item 009-32 eliminated use of MIL-PRF-24667C, Type VIII low temperature cure nonskid on LHA/LHD flight deck.

  - New requirements for heat-resistant nonskid to be based on the small-scale heat and deck flexure tests developed by NRL as follows:
    1. Heat flexure testing to be required for Composition D nonskid.
    2. Age nonskid - 300 hours of UV degradation.
    3. Flex nonskid under simulated exhaust heat at 400°F - 50 deflections in 4-pt bend test while at elevated temperatures (15 min hold cycle).
    4. Stress nonskid with corrosive conditions - 150 hours of salt spray.

Updated specification performance requirements based on successful products demonstration on LHA/LHD.
Update to MIL-DTL-24607 & MIL-PRF-24596 Updates In Process
Fleet Need for New Interior topcoat colors

- Updated to address formulas citing ingredients no longer available and to update colors.
- Fleet had been requesting to use “bright white” in place of soft white to lighten spaces and increase visibility.
- SEA 05P2 noted need for flat, dark blue as per NSTM 631 Table 631-8-11, Note 9:
  "Pastel blue, color number 25526, MIL-DTL-24607 shall be used on bulkheads in CIC spaces and outboard operations and communications spaces with Broad Band Blue Operation Lighting systems. Overheads shall be insignia blue, color number 35044."
- SEA 05P2 / NRL worked with Navy supply system and paint suppliers to determine sales volumes for cited colors. Six of the original eleven colors showed very low sales volume.
  - Sun Glow
  - Rosewood
  - Yellow Gray
- Updates to MIL-DTL-24607 & MIL-PRF-24596 resulted in removal of six colors and addition of two.

MIL-DTL-24607 & MIL-PRF-24596 in final NAVSEA review process, if interested contact SEA 05P2
Streamlined Interior Topcoat Colors

- Color reduction in interior alkyd specifications reduces logistics and waste.

<table>
<thead>
<tr>
<th>Color</th>
<th>Shade</th>
<th>Shade</th>
<th>Shade</th>
<th>Shade</th>
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<td>Rosewood</td>
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<td>Clipper Blue</td>
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<td>Beach Sand</td>
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<td>#25526</td>
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<td>Green Gray</td>
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<td>Bulkhead Gray</td>
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<td>Bright White</td>
<td>Soft White</td>
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<tr>
<td>#35044</td>
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Update to TT-C-492 Specification In Process Was for Anti-sweat Coatings, but Expanded to Include “Insulation” Coatings


- Current TT-C-492C cites archaic Federal and ASTM test methods.

- Current TT-C-492 not cited in Standard Item 009-32, but condensation control coatings cited by tradename – not in accordance with CNRMC policy.

- TT-C-492 does not, and will not have a qualified product list, but rather will be a “first article” specification.

TT-C-492 specification update in process with NSWC-PD, Code 613 as project lead.
TT-C-492 Specification Update In Process

1.2.1 Types
• Type I – maximum VOC content of 50 grams per liter (0.4 pounds per gallon)
• Type II – maximum VOC content of 150 grams per liter (1.3 pounds per gallon)
• Type III – maximum VOC content of 250 grams per liter (2.1 pounds per gallon)

1.2.2 Classes
• Class 1 – thermal conductivity less than or equal to 0.05 watts/(meter × kelvin) [0.03 BTU/(hour × foot × °F)]
• Class 2 – thermal conductivity greater than 0.05 watts/(meter × kelvin)
  [0.03 BTU / (hour × foot × °F)] but less than or equal to 0.20 watts/(meter × kelvin) [0.116 BTU / (hour × foot × °F)]
• Class 3 – thermal conductivity greater than 0.20 watts/(meter × kelvin)
• Class 4 – prevent condensation by water absorption or water vapor absorption

1.2.3 Grades
• Grade A – prevent condensation for a minimum of 96 hours
• Grade B – prevent condensation for a minimum of 24 hours
• Grade C – prevent condensation for a minimum of 8 hours

1.2.4 Applications
• Application A – maximum final DFT greater than 3.2 millimeters (⅛ inch)
• Application B – maximum final DFT equal to or less than 3.2 millimeters (⅛ inch)

Updates include requirements for both condensation control coatings and “insulation” coatings.
### TT-C-492 Specification Update In Process

#### TABLE III. Quantitative requirements.

<table>
<thead>
<tr>
<th>Quantitative property</th>
<th>Classification</th>
<th>Standard</th>
<th>Requirements</th>
<th>Test methods</th>
<th>Conformance testing</th>
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<td>3.4.1</td>
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<td>Dry time</td>
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<td>Sag resistance</td>
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<td>Knife adhesion</td>
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<td>3.4.10</td>
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</tbody>
</table>

*Red text is a legacy requirement. However, the specific methodology was revised.*

*Updates include requirements for both condensation control coatings and “insulation” coatings.*
TT-C-492 Specification Update In Process

NEW REQUIREMENTS: Updated TT-C-492 uses a new condensation testing apparatus that is easier to fabricate, more realistic to coat, and that can be fabricated from steel, aluminum, or copper to address specific applications.

Enclosure will be coated and filled with ice and water.

- Pass/fail based on any accumulated condensation at specified time intervals (8 hrs, 24 hrs, and 90 hrs).
- Corners and flat sides to represent bulkheads.
- Expose to “normal” shipboard conditions like 60-70 Fahrenheit with relative humidity of 70 to 80%.

Specification Review Board (SRB) process ended on 11 Mar 2021, NAVSEA adjudicating comments.
Demonstrate Spray Applied Polysiloxane Nonskid and Enhanced Surface Preparation on Aluminum Flight Deck

ISSUE:  OSR team observe pitting on aluminum class flight deck during nonskid removal/replacement.
- Pits up to 2 mm (79 mils) depth.
- Nonskid removal and surface preparation using stainless steel shot could cut into aluminum flight deck.

Need to identify nonskid removal and surface preparation process that does not appreciably wear deck, but prepares surface effectively to support extended nonskid service life.

REQUIREMENTS:  FY-22, Change 1, Standard Item 009-32, Table 2, Lines 55 & 56 require application of either MIL-PRF-24667C, Type I or Type V nonskid on flight deck surface preparation in accordance with:
“THOROUGH ABRASIVE BLAST CLEANING OF NON-FERROUS METALS, SSPC-SP 17 USING GARNET, ALUMINUM OXIDE, CRUSHED GLASS, OR STAINLESS STEEL SHOT – OR – WATERJETTING TO NACE/SSPC-SP WJ-2.”

Abrasive blasting will correct areas with pitting, but repeated blasting every few years will remove too much aluminum over the 20 year service, potentially compromising the inherently thin aluminum flight deck.

NEW TECHNOLOGY:  Spray applied the MIL-PRF-24667 qualified polysiloxane nonskid over two coats of qualified primer to maximize overall flight deck nonskid system service life.

Demonstrated removal of nonskid using ultrahigh pressure waterjet operating at <30,000 psi.

Demonstrated wet abrasive blasting on 100% of flight deck to provide uniform surface profile to maximize primer adhesion and apply two coats of primer to maximize nonskid system corrosion control performance.

Goal is greater than 5 years of nonskid service.
Spray Applied Polysiloxane Nonskid Coefficient of Friction Can Exceed Requirements for Roller Applied Nonskid Over Time

- Spray applied polysiloxane nonskid Coefficient of Friction (CoF) measured using μ-Deck Meter in as-applied condition and after in-service operational periods on ships. Baseline requirements are for CoF measured using μ-Deck Meter as appear in the MIL-PRF-32577 Thermal Spray Nonskid (TSN) specification.

As Applied Flight Deck Nonskid CoF

- Spray applied polysiloxane nonskid CoF – 1.37-1.59
- Roller applied MIL-PRF-24667, Type I and Type V epoxy nonskid CoF – 1.35-1.45

- In Service CoF of spray applied polysiloxane nonskid measured after shipboard operations.

CoF of spray applied polysiloxane nonskid on in-service steel decks maintaining CoF and service life limited by mechanical damage.
ISSUE: Oxsol 100 or parachlorobenzyltrifluoride (PCBTF), an exempt solvent used in Navy coatings, was listed under California Proposition 65 as a carcinogen based on a 2018 study from the National Toxicological Program.

South Coast Air Quality Management District (SCAQMD) proposing to eliminate exempt solvent status.

NAVSEA SPECIFICATIONS
THAT MAY BE AFFECTED: Performance Specifications like MIL-PRF-24635.

Interior Alkyd Specifications like MIL-DTL-24607.

SEA 05P2 supported the American Coatings Association (ACA) during a virtual public meeting on 11 Feb 2021 with South Coast Air Quality Management District (SCAQMD) by explaining that PCBTF is used in 64% of NAVSEA’s coating specifications.

De-listing of PCBTF as an exempt solvent in California could adversely affect ability of U.S. Navy to coat ships in San Diego, CA.
Conclusions

• NAVSEA goal is to support NSRP SPC panel by developing new materials and processes to extend service life and reduce costs.

• NAVSEA published FY-22, Change 1 update to Standard Item 009-32 on 21 Feb 2021.

• NAVSEA published update to conventional nonskid specification MIL-PRF-24667D on 16 Feb 2021.

• NAVSEA publishing update to TT-C-492 condensation control coating.

• NAVSEA demonstrating new coatings and processes on aluminum flight deck.

• NAVSEA working with ACA, NSRP SPC and waterfront community to address evolving regulatory issues.
QUESTIONS?
Additional Specification Updates

- MIL-PRF-16173 expansion of class definitions (temporary vs. persistent, hard vs. soft, solvent- vs. steam-removable, etc.).

- TT-P-28J revision out for industry comments on 21 May 2020
  - Liquid paints no longer limited to aluminum-containing.
  - New class for TSN topcoat.

- MIL-PRF-32584 found to have significant issues. Interim amendment planned by end of FY-21.

- Draft MIL-PRF-XX642 undergoing major revision. Electrical grade mat and sheet to be removed (i.e., SEA 05Z33 cognizance).

NSRP SPC team invited to intended to contact SEA 05S to be added to review team for specifications.