



**SHERWIN
WILLIAMS.**

Chemical Coatings

CC-M1

MIL-DTL-53039C, Type I

1K Aliphatic Polyurethane Chemical Agent Resistant Coating

Aircraft White, 37875 F93W100

Tan 686A, 33446 F93H107

HAPS FREE

Brown, 383, 30051 F93N107

Green 383, 34094 F93G105

Tan 686A, 33446 F93H112

Black, 37030 F93B109

<u>DESCRIPTION</u>	<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>																								
<p>MIL-DTL-53039C, Type I coatings are 3.5 VOC single component moisture cure aliphatic polyurethane camouflage chemical agent resistant coating (CARC) for military equipment. They conform to MIL-DTL-53039C, Type I composition and performance specification. They can be effectively decontaminated after exposure to liquid chemical agents.</p> <p>Advantages:</p> <ul style="list-style-type: none"> • Single component • 3.5 lb/gal VOC • Fast solvent and water resistance • Very responsive to force curing • Reduces waste <p>The following MIL-DTL-53039C Type I products have been approved by U.S. Army Research Lab, Aberdeen Proving Ground, Aberdeen, MD.</p> <p>Products listed below contain HAPS:</p> <table border="1"> <thead> <tr> <th>Part #</th> <th>QPL#</th> <th>Color#</th> </tr> </thead> <tbody> <tr> <td>F93H107</td> <td>Q1788</td> <td>33446</td> </tr> <tr> <td>F93W100</td> <td>Q1821</td> <td>37875</td> </tr> </tbody> </table> <p>Products listed below are HAPS FREE:</p> <table border="1"> <thead> <tr> <th>Part #</th> <th>QPL#</th> <th>Color#</th> </tr> </thead> <tbody> <tr> <td>F93N107</td> <td>Q1785</td> <td>30051</td> </tr> <tr> <td>F93G105</td> <td>Q1820</td> <td>34094</td> </tr> <tr> <td>F93H112</td> <td>Q1790</td> <td>33446</td> </tr> <tr> <td>F93B109</td> <td>Q1891</td> <td>37030</td> </tr> </tbody> </table>	Part #	QPL#	Color#	F93H107	Q1788	33446	F93W100	Q1821	37875	Part #	QPL#	Color#	F93N107	Q1785	30051	F93G105	Q1820	34094	F93H112	Q1790	33446	F93B109	Q1891	37030	<p>Gloss:</p> <p>Black, Brown 383 & Green 383: 60° 1.0 unit maximum 85° 3.5 units maximum</p> <p>Tan 686A: 60° 1.5 unit maximum 85° 4.0 units maximum</p> <p>Volume Solids: 51-54 ± 1% may vary by color</p> <p>Viscosity: 65-80 Krebs Units</p> <p>Recommended film thickness:</p> <p>Mils Wet 4.0 - 6.0 Mils Dry 2.0 - 3.0</p> <p>Minimum 1.8 mils DFT per MIL-DTL-53039C Type I. Higher than 5.0 mils dft may blister under hot and humid conditions.</p> <p>Spreading Rate (no application loss) 267-441 sq ft/gal @ 2.0-3.0 mils DFT</p> <p>Drying (2 mils dft, 77°F, 50% RH):</p> <p>To Touch: 5-30 minutes Dry Hard: 2-3 hours maximum Dry Through: 3-4 hours maximum Complete Cure: 7 days Force Dry to obtain dry hard: 3-5 min. @ 275°F, or 8-10 min. @ 210°F, or 15-20 min. @ 165°F, or 20-30 min. @ 145°F</p> <p>Thicker films, lower temperature, or lower humidity will increase cure time.</p> <p>Flash Point: With HAPS: 44-60°F PMCC HAPS FREE: 96°F PMCC</p> <p>Pot Life: unlimited if kept from moisture</p> <p>Package Life: 1 year unopened</p> <p>Air Quality Data: Photochemically reactive Volatile Organic Compounds (VOC) as packaged, maximum 3.5 lb/gal, 420 g/L</p> <p>An Environmental Data Sheet is available from your local Sherwin-Williams facility.</p>	<p>Steel: Surface must be clean and free of grease, dirt, oil, rust, fingerprints, and other contaminants to insure optimum adhesion and performance properties. Chemical pretreatment, (zinc phosphate) or DOD-P-15328D Wash Primer, E90G4, gives best adhesion and performance results. Where blasting is appropriate, blast in accordance with SSPC-SP6. For optimum adhesion pretreat blasted surface. Prime with wash primer E90G4 within two hours after blasting.</p> <p>Aluminum: Clean with acidic cleaner or other appropriate cleaner depending on contamination. Pretreat with chromate conversion coating MIL-DTL-5541F, Wash Primer DOD-P-15328D, E90G4, or anodize per MIL-A-8625F. See below for primers.</p> <p>Galvanized and other metals: Clean and remove oxidation contamination on surface, followed by treatment with DOD-P-15328D wash primer, E90G4. Due to the variability in these surfaces, testing adhesion on each situation is recommended. See below for primers.</p> <p>Primers must be applied under the topcoat. For ferrous substrates, use MIL-DTL-53022C primer, e.g. E90W201 (Type I), E90H226 (Type II, faster recoat), E90HC227 (2.8 VOC), or MIL-DTL-53030B, E90W501. For non-ferrous substrates, use MIL-P23377J, E90G203 (Type I, Class C2, 2.8 VOC); MIL-DTL-53022C (see above) or MIL-DTL-53030B (see above).</p> <p>Note: See Mil-DTL-53072C for details.</p> <p>Testing: Due to the wide variety of substrates, surface preparation methods, application methods, and environments, the customer should test the complete system for adhesion and compatibility prior to full scale application.</p>
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APPLICATION

Typical Setups

Reduction: If required, use MIL-T-81772 Type 1 Reducer, R91K20 or equivalent. MAK R6K30 (slow), Polane® Reducers R7K84 and R7K94 (medium), R7KC1 VOC exempt reducer or Tertiary Butyl Acetate are also acceptable. Reducer must be polyurethane grade.

Conventional Spray:

Air Pressure 50-60 psi
Tip070

Air Assisted Airless:

Air Pressure 20-30 psi
Fluid Pressure 800 psi
Tip011-.015"

HVLP:

Atomizing Air at Cap 8-10 psi
Fluid Pressure 5-10 psi
Tip070

Cleanup:

Clean tools/equipment immediately after use with MEK, MIBK, MAK, Acetone, Tertiary Butyl Acetate or any Polane® Reducer. A blend of MIBK and Xylene works well also.

Follow manufacturer's safety recommendations when using any solvent.

SPECIFICATIONS

Product Limitations:

- Protect product from moisture getting into the paint pots for best working pot-life. Purging pressure pots with argon, nitrogen, carbon dioxide, M.I.G., T.I.G. welding gas is effective.
- Unopened containers of this coating should be mechanically agitated using a paint shaker before use. Hand stirring, or drill mixing of the coating is not recommended due to the possible exposure of the entire contents to moisture in the atmosphere.
- Material should be agitated in the pot during application.

Performance Properties:

Meets all the performance properties of MIL-DTL-53039C Type I.

CAUTIONS

FOR INDUSTRIAL SHOP APPLICATION

Thoroughly review product label and Material Safety Data Sheet (MSDS) for safety and cautions prior to using this product.

A Material Safety Data Sheet is available from your local Sherwin-Williams facility.

Please direct any questions or comments to your local Sherwin-Williams facility.

Note: Product Data Sheets are periodically updated to reflect new information relating to the product. It is important that the customer obtain the most recent Product Data Sheet for the product being used. The information, rating, and opinions stated here pertain to the material currently offered and represent the results of tests believed to be reliable. However, due to variations in customer handling and methods of application, which are not known or under our control, The Sherwin-Williams Company cannot make any warranties as to the end result.