



Chemical Coatings

CC-M1

MIL-DTL-53039B Type I IK Aliphatic Polyurethane Chemical Agent Resistant Coating

Black 37030 F93B102
Green 383, 34094 F93G104

Brown 383, 30051 F93N105
Tan 686A, 33446 F93H107

<u>DESCRIPTION</u>	<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>																						
<p>MIL-DTL-53039B 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-53039B 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-53039B Type I products have been approved by U.S. Army Research Lab, Aberdeen Proving Ground, Aberdeen, MD, and are listed on QPL list under Pratt & Lambert's product codes.</p> <table border="0"> <tr> <td>Sherwin-Williams</td> <td><u>QPL</u></td> </tr> <tr> <td>F93B102</td> <td>Q1252</td> </tr> <tr> <td>F93G104</td> <td>Q1272</td> </tr> <tr> <td>F93N105</td> <td>Q1256</td> </tr> <tr> <td>F93H107</td> <td>Q1398</td> </tr> </table> <p>The following products are currently not stocked and are available by special order only:</p> <table border="0"> <tr> <td>Sherwin-Williams</td> <td><u>Color #</u></td> <td><u>QPL</u></td> </tr> <tr> <td>F93W100</td> <td>37875</td> <td>Q1163</td> </tr> <tr> <td>F93H106</td> <td>33303</td> <td>Q1233</td> </tr> <tr> <td>F93HC111</td> <td>30372</td> <td>FMS</td> </tr> </table> <p>Note: Special MIL-DTL-53039B Type I products are available for usage in Pennsylvania and Texas. Ask your Sherwin-Williams sales representative for details.</p>	Sherwin-Williams	<u>QPL</u>	F93B102	Q1252	F93G104	Q1272	F93N105	Q1256	F93H107	Q1398	Sherwin-Williams	<u>Color #</u>	<u>QPL</u>	F93W100	37875	Q1163	F93H106	33303	Q1233	F93HC111	30372	FMS	<p>Gloss:</p> <p>Black, Brown & Green:</p> <p>60° 1.0 unit maximum 85° 3.5 units maximum</p> <p>Tan:</p> <p>60° 1.5 unit maximum 85° 4.0 units maximum</p> <p>Volume Solids: 50-52 ± 1% may vary by color</p> <p>Weight per Gal: 9.9-11 lb/gal</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 Minimum 1.8 mils DFT per MIL-DTL-53039B Type I. Higher than 5.0 mils dft may blister under hot and humid conditions.</p> <p>Spreading Rate (no application loss) 262-425 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: 3 hours maximum Dry Through: 4 hours maximum Complete Cure: 7 days Force Dry: to obtain dry hard 5 min. @ 275°F, or 10 min. @ 210°F, or 20 min. @ 165°F, or 30 min. @ 145°F</p> <p>Thicker films, lower temperature, or lower humidity will increase cure time.</p> <p>Flash Point: 44°F</p> <p>Pot Life: unlimited if kept from moisture</p> <p>Package Life: 1 year, inside storage</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-15328 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-C-5541), Wash Primer DOD-P-15328, E90G4, or anodize per MIL-A-8625. See below for primers.</p> <p>Galvanized and other metals: Clean and remove oxidation contamination on surface, followed by treatment with DOD-P-15328 wash primer, E90G4. Due to the variability in these surface, 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-P-53022B primer, e.g. E90W201 (Type I), E90H226 (Type II, faster recoat), E90HC227 (2.8 VOC), or MIL-P-53030, E90W501. For non-ferrous substrates, use MIL-P23377G, E90G203 (Type I, Class C, 2.8 VOC); MIL-P-53022B (see above) or MIL-P-53030 (see above).</p> <p>Check the data sheet of each primer for recoat time of topcoat, e.g. E90H226 can be topcoated in 20-30 minutes air dry.</p> <p>Note: See Mil-C-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>
Sherwin-Williams	<u>QPL</u>																							
F93B102	Q1252																							
F93G104	Q1272																							
F93N105	Q1256																							
F93H107	Q1398																							
Sherwin-Williams	<u>Color #</u>	<u>QPL</u>																						
F93W100	37875	Q1163																						
F93H106	33303	Q1233																						
F93HC111	30372	FMS																						

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 65-100 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.
- Material must be put on a paint shaker prior to use. Avoid stirring by hand in the open cans or a mechanical mixer due to exposure of entire contents to moisture in the atmosphere.
- Material should be agitated in the pot.

Performance Properties:

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

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.

CAUTIONS

Thoroughly review product label 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.

LABEL CAUTIONS

ISEE CONTENTS STATEMENT ELSEWHERE ON LABEL.

Contents are FLAMMABLE. Vapors may cause flash fires. Keep away from heat, sparks, and open flame. During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

VAPOR HARMFUL. Use only with adequate ventilation. Wear an appropriate properly fitted vapor/particulate respirator (NIOSH approved) during and after application, unless air monitoring demonstrates vapor/mist levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Adequate ventilation required when sanding or abrading the dried film. If adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use.

Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage.

FIRST AID: If INHALED: If affected, remove from exposure. Restore breathing. Keep warm and quiet. If on SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing. Launder before re-use. If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention. If SWALLOWED: Call Poison Control Center, hospital emergency room, or physician immediately.

SPILL AND WASTE: Remove all sources of ignition. Ventilate and remove with inert absorbent. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE.

Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Abrading or sanding of the dry film may release crystalline silica which has been shown to cause lung damage and cancer under long term exposure.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN.

FOR INDUSTRIAL USE ONLY.

SEE MATERIAL SAFETY DATA SHEET. 24457-101303.