



**SHERWIN  
WILLIAMS.**

# Chemical Coatings

CC-M14B

## MIL-PRF-85285D, Type I, Class H Full Gloss Ordnance Polyurethane Topcoat COLORS\*

Various Colors\* (Component A)  
Catalyst (Component B) ..... V93V29  
Activator (Component C) ..... V93V4

<u>DESCRIPTION</u>	<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>
<p><b>MIL-PRF-85285D Type I, Class H</b> coatings are multi-component (3K), low VOC, high solids polyurethane topcoats designed as a finish coat for military aircraft and equipment. They meet MIL-PRF-85285D, Type I, Class H composition and performance specification.</p> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• Low viscosity at 3.5 VOC</li> <li>• Very low HAPS content &lt;3% by weight</li> <li>• Excellent flow characteristics</li> <li>• Free of lead and chromate hazards</li> </ul> <p>These MIL-PRF-85285D products have been approved by the U.S. Naval Air Warfare Center (NAWC), Patuxent River, MD. Copies of approval letter are available upon request.</p> <p>*All gloss colors in the Federal Standard 595B are available. It should be noted that F91W26 is covered by a separate data page (CC-M14A) due to use of a different catalyst and activator.</p>	<p><b>Gloss (60°):</b> 90+ units @ 1.8-2.3 dft</p> <p><b>Volume Solids:</b> Component A: 56-58% Admixed: 51-53%</p> <p><b>Viscosity:</b> varies by color Component A: 60-65 Krebs Units Admixed: 16-20 seconds #2 Zahn</p> <p><b>Recommended film thickness:</b> Mils Wet 3.5-4.5 Mils Dry 1.8-2.3</p> <p><b>Spreading Rate</b> (no application loss) 356-472 sq ft/gal @ 1.8-2.3 mils DFT</p> <p><b>Drying</b> (77°F, 50% RH): Set to Touch: 2 hours Dry to Tape: 8 hours</p> <p><b>Flash Point:</b> 80-97°F Pensky-Martens Closed Cup</p> <p><b>Mixing Ratio:</b> by volume The mix ratio and the Component B and Component C used vary according to Part A (F91W26 is covered by a separate data page (CC-M14A due to use of a different catalyst and activator.) ALL COMPONENTS MUST BE USED. 1 part Component A 1 part Component B (V93V29) 1/8 part Component C (V93V4)</p> <p><b>Admixed product should be allowed to "sweat in" for 30 minutes for optimum color stability.</b></p> <p><b>Pot Life:</b> 4 hours <b>Package Life:</b> 1 year, inside storage <b>Storage:</b> Protect from moisture</p> <p><b>Air Quality Data:</b> Non-photochemically reactive Volatile Organic Compounds (VOC) catalyzed and reduced, maximum 3.5 lb/gal, 419 g/L</p> <p>An Environmental Data Sheet is available from your local Sherwin-Williams facility.</p>	<p><b>Steel:</b> 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, e.g. E90G4, gives best adhesion and performance results. Where blasting is appropriate, blast in accordance with SSPC-SP6. For optimum adhesion pretreat blasted surface immediately. Prime with wash primer E90G4 within two hours after blasting.</p> <p><b>Aluminum:</b> Clean with acidic cleaner or other appropriate cleaner depending on contamination. Pretreat with chromate conversion coating MIL-PRF-5541F, wash primer DOD-P-15328D, E90G4, or anodize per MIL-A-8625F.</p> <p><b>Galvanized and other metals:</b> Clean and remove oxidation contamination on surface, followed by treatment with DOD-P-15328D wash primer, E90G4, or chemical pretreat with zinc phosphate. Due to the variability in these surface, testing adhesion on each situation is recommended.</p> <p><b>Primers must be applied under the MIL-PRF-85285D topcoats.</b> For <b>ferrous</b> substrates, use MIL-DTL-53022C, Type II primer, E90H226. MIL-DTL-53030B may also be used. For <b>non-ferrous</b> substrates, use MIL-P-23377J, Type I, Class C2, E90G203.</p> <p><b>Testing:</b> 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>

## APPLICATION

### Typical Setups

Best application results are obtained by applying 2 medium wet passes and allowing a "tack-off" time between coats. Typical "tack-off" time is 5-30 minutes.

#### May be applied by:

Conventional  
Airless  
Air Assisted Airless  
HVLP Electrostatic

Please consult with your Sherwin-Williams sales representative for proper settings for your spray equipment.

#### Cleanup:

Clean tools/equipment immediately after use with MIL-T-81772, Type I Reducer, R91K20, Methyl Propyl Ketone, or other polyurethane reducer. Do not use lacquer thinner or epoxy thinner. Follow manufacturer's safety recommendations when using any solvent.

## SPECIFICATIONS

#### Product Limitations:

- The catalyst (Component B) and activator (Component C) vary according to Component A. The proper catalyst and activator MUST be used.
- Do not vary catalyst mixing ratio. Mixing ratio varies by Component A.
- **F91W26 is covered by a separate data page (CC-M14B) due to use of a different catalyst and activator.**

#### Performance Properties:

Meets all the performance properties of MIL-PRF-85285D Type I Class H.

**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

SEE CONTENTS STATEMENT ON LABEL.

Contents are COMBUSTIBLE. Keep away from heat and open flame.

VAPOR HARMFUL. Use only with adequate ventilation. This product must be used with an appropriate catalyst. Follow the respirator requirement and instructions on the catalyst.

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.

This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

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. 21638-051905.

Catalyst CONTAINS ISOCYANATES. People who have chronic (long-term) lung or breathing problems or have had a reaction to isocyanates, must not be in the area where this product is being applied. Where overspray is present, a positive pressure air-supplied respirator should be worn. If unavailable, a properly fitted organic vapor/particulate respirator may be effective. Consult catalyst MSDS and product label for complete handling instructions.