



# General Industrial Coatings

CC-M45-H

## MIL-DTL-53039E, Type IX 1K Aliphatic Polyurethane, 3.5 lb/gal VOC Chemical Agent Resistant Coating

Tan 686A, 33446.....F93H709 Tan, 33531 .....F93H739

### DESCRIPTION

**MIL-DTL-53039E, Type IX** coatings are single component, 3.5 lbs./gal. \*VOC, VOHAP free compliant, moisture cure aliphatic polyurethane chemical agent resistant coatings (CARC) for military equipment. They can be effectively decontaminated after exposure to liquid chemical agents.

#### Advantages:

- Meets all the performance properties of MIL- DTL-53039E, Type IX.
- Passes 800 hours ASTM G154 accelerated weathering using a UV 340A light source
- Single component
- Fast solvent and water resistance
- Excellent exterior durability
- Complies with 3.5 \*VOC solvent emissions.
- VOHAP free
- Free of lead and chromate hazards

The following MIL-DTL-53039E, Type IX products are approved by the U.S. Army Research Lab, Aberdeen Proving Grounds, Aberdeen, MD:

Sherwin-Williams	QPD
F93H709	Q2309
F93H739	Q2310

\* VOC Compliance limits vary from state to state; please consult local Air Quality rules and regulations.

An Environmental Data Sheet is available from your local Sherwin-Williams facility or at [www.PaintDocs.Com](http://www.PaintDocs.Com).

### CHARACTERISTICS

**60° Gloss:** 1.6 unit max.  
**85° Gloss:** 4.0 units max.

**Volume Solids:**  
F93H709 54.5 ± 2 %  
F93H739 55.9 ± 2 %

**Viscosity (at 77° F):** 55-65 Krebs Units  
15-25 secs., #3 Zahn Cup

**Recommended Film Thickness:**  
Mils Wet 3.6-5.5  
Mils Dry 2.0-3.0

**Spreading Rate (no application loss):**  
F93H709 438 ft.<sup>2</sup>/gal. at 2.0 mil DFT  
F93H739 448 ft.<sup>2</sup>/gal. at 2.0 mil DFT

**Cure:**  
Air Dry  
Force Dry 60 mins. flash, 30 mins. at 140° F

The force dry schedule above is provided as a guide. Wet film thickness, humidity, flash off time, part size and oven characteristics will all have an effect on drying and cure. Test for your specific application and line conditions.

**Substrate Disclaimer:** Curing of coating at temperatures higher than the heat distortion parameters of the substrate may cause substrate issues.

**Drying:** 2.0 mils DFT at 77° F, 50% RH  
To Touch 30-60 minutes  
To Dry Hard 3 hours  
Through-Dry 4 hours  
To Recoat w/ Itself 30-60 minutes  
Total (Full Properties) 7-10 days

Shake products well before using.

**Potlife (at 77° F):** \*8 hours

**\*Potlife Disclaimer:** Potlife listed applies to containers which have been opened & exposed to air. It is highly recommended to maintain an argon or nitrogen blanket over the product at all times to ensure a prolonged pot life.

### Flash Point (Pensky Martens Closed Cup):

F93H709 101° F  
F93H739 101° F

### Air Quality Data:

Photochemically Reactive  
Volatile Organic Compounds  
(VOC, less exempt solvents, maximum):  
F93H709 3.50 lbs./gal., 420 g/L  
F93H739 3.50 lbs./gal., 420 g/L

**Recommended Storage:** Inside, sealed container, 40-120° F, no freeze hazard. Protect from moisture.

**Package Life:** 18 months, unopened  
Inside storage

### SPECIFICATIONS

#### CLEANING & PRETREATMENTS

Follow the most current revisions of MIL-DTL-53072 and/or TT-C-490 for required cleaning and pretreatment application before coating.

**Note:** See the current MIL-DTL-53072 for complete details regarding substrate preparation, coatings, and application.

**General:** All substrates should be free of mold release, oil, grease, dirt, fingerprints, drawing compounds, surface passivation treatments and any other contaminants to ensure optimum adhesion and coating performance. For non-military uses, consult Metal Preparation brochure CC-T1 for additional details.

**Testing:** The information, data, and recommendations set forth in this Product Data Sheet are based upon test results believed to be reliable. However, due to the wide variety of substrates, substrate properties, surface preparation methods, equipment and tools, application methods, and environments, the customer should test the complete system for adhesion, compatibility and performance prior to full scale application.

## APPLICATION

### Typical Setups

The paint must be shaken for a minimum of 15 minutes prior to use. This ensures that the product is homogenous for application.

For all application and usage guidelines, please consult and review the MIL-DTL-53072 & TT-C-490 specifications as well as your local Sherwin-Williams representative.

**Cleanup:** Clean tools & equipment immediately after use with R6K9 (Acetone), R6K10 (MEK), R6K16 (MIBK), R6K30 (MAK), R6K38 (Tertiary Butyl Acetate), R91K20 (MIL-T-81772 Type I) or any Polane reducer. A blend of MIBK / Xylene (R2K4) or may also be used.

Follow manufacturer's safety recommendations when using any solvent.

## PRODUCT LIMITATIONS

1. **This product must be properly agitated before using.** Material agitation should be followed throughout application to maintain its homogenous state
2. Surface preparation is important for coating performance.
3. If parts have been primed for longer than 7 days, they must be sanded and recoated with a mist coat of E90A228 before topcoating for good adhesion.
4. 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.
5. **Product needs to be protected from moisture.**

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## CAUTIONS

### **FOR INDUSTRIAL SHOP APPLICATION ONLY**

**Thoroughly review the product label and Safety Data Sheet (SDS) for safety information and cautions prior to using this product.**

To obtain the most current version of the Environmental Data Sheet (EDS), Product Data Sheet (PDS), or Safety Data Sheet (SDS) please visit your local Sherwin-Williams facility or [www.PaintDocs.Com](http://www.PaintDocs.Com).

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

#### **Note:**

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