



# TECHNICAL INFORMATION

**TWO COMPONENT YELLOW DUST  
F93YC102  
MEETS THE PERFORMANCE OF MIL-C-53039A**

**CHEMICAL  
COATINGS**

## PRODUCT DESCRIPTION

**F93YC102** is a Two Component Moisture Cure Aliphatic Polyurethane Camouflage Chemical Agent Resistant coating (CARC) for military equipment. It conforms to MIL-C-53039A performance specification.

This special color is referenced as Yellow Dust.

## CHARACTERISTICS

### **As Supplied:**

#### **Pigmented Component F93YC102**

**Wt. per Gallon:** 10.1 - 10.4 lb./gal.  
**Volume Solids:** 51.5 - 53.5%  
**VOC:** 3.7 lb./gal. max. Comp. A  
**Viscosity:** 55 - 70 KU  
**Package Life:** 6 months, inside storage  
**Flash Point:** 96°F

### **As Supplied:**

#### **Accelerator V66VC218**

**Wt. per Gallon:** 7.25 lb./gal.  
**Volume Solids:** 100%  
**VOC:** Zero  
**Viscosity:** 10 sec., #3 Zahn

### **Mix Ratio:**

10 parts by volume F93YC102  
1 part V66VC218

Components are packed in short filled containers, so that two quart containers of V66VC218 may be added to one five gallon container of F93YC102 to yield five full gallons.

**Note:** Use of the V66VC218 is required to eliminate blistering in dry film builds above one mil.

### **Admixed 10:1 by volume:**

**VOC:** 3.5 lb./gal. max.  
**Viscosity:** 15 - 19 secs. #3 Zahn  
**Potlife:** 16 hours at 75°F,  
8 hours at 100°F

**Spreading Rate:** 825sq.ft./mil at  
1.0 mil dry with no application loss

### **Recommended Reducer:**

Reduction not required. Product may be reduced with Acetone/Oxsol 100, most Ketones or other polyurethane reducers to extend potlife.

Consult Sherwin Williams's representative prior to reducing.

## CHARACTERISTICS continued

### **Recommended Film Thickness:**

Minimum 1.8 mil dry according to MIL-C-53039A, typically 2.0 - 3.0 mils dry, or 4.0 - 6.0 mils wet. Higher dry film thickness will increase gloss. Lower film thickness will reduce gloss.

**Conventional Spray:** Use 50 - 60 psi atomizing air with a .070 fluid tip.

**Air-Assisted Airless:** Use 2000 psi fluid 25- 35 psi atomizing air and a 0.009 - .011" fluid tip.

**HVLP:** Use 65 psi atomizing air, 5 - 10 psi fluid pressure and a .055" fluid tip.

**Clean Up:** Use MEK, MIBK, MAK or any Polane<sup>®</sup> reducer. Blend of MIBK and Xylene works well too.

### **Dry Time:**

Air dry 2 mils dry, 77°F at 50% RH  
To touch 5 - 10 minutes  
Dry hard 1 hour max.  
Dry through 2 hours max.  
Complete cure obtained in 7 days.

Force dry to obtain dry hard:

3 minutes at 275°F or  
5 minutes at 210°F or  
15 minutes at 145°F

Thicker films, lower temperature, or lower humidity will increase cure time.

**Gloss 60°:** 5 - 15 at 2.0 - 3.0 mils dry cured between 110°F and 165°F

**Performance Properties:** Meets all the performance properties of MIL-C-53039A.

## SPECIFICATIONS

### **Surface Preparation**

**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.

**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.

## SPECIFICATIONS continued

**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 surfaces, testing adhesion in each situation is recommended. See below for primers.

**Primers must be applied under the CARC topcoat.** For ferrous substrates, use MIL-P-53022B primer, E90W201 (Type I), or E90H226 (Type II).

For non-ferrous substrates, use MIL-P-23377F, e.g. E90Y203, or MIL-P23377G, E90G203 (Type I, Class C, 2.8 VOC), MIL-PRF-85582C E90Y500 (Type 1, Class) or MIL-P-53022B (see above).

Check the data sheet of each primer for recoat time of topcoat.

Note: See Mil-C-53072C for details.

### **Product Limitations:**

1. 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.
2. 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.
3. Material should be agitated in the pot.

## CAUTIONS

This product contains isocyanates. People who have chronic (long-term) lung or breathing problems or have a reaction to isocyanates, must not be in the area where this product is being applied. In spray applications where Overspray is not totally controlled, an air Supplied respirator should be worn to prevent exposure. Where air supplied respirators are not available, an organic vapor/particulate combination respirator may be effective. Before using this product carefully read the instructions and precautions on both the catalyst and pigment labels.

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**Contents are Flammable.** Keep away from heat, sparks and open flame. Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using. Keep container closed when not in use.

**CONTAINS Ketones and Esters**

**VAPOR HARMFUL.** Use only with adequate ventilation. Wear an appropriate properly fitted vapor/particulate respiratory (NIOSH/MSHA approved) during and after application unless air monitoring demonstrates vapor/mist levels are below applicable levels. Adequate ventilation required when sanding or abrading the dried film. If adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH/MSHA TC21C or equivalent). Follow respirator manufacturer's direction 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:** Do not induce vomiting. Get medical attention 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 regulations 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 dried film may release crystalline silica which has been shown to cause lung damage and cancer under long-term exposure.

**CAUTIONS** Continued

**Note:** Pursuant to Proposition 65, these products contain chemicals known to the state of California to cause cancer, birth defects, and other reproductive harm.

**DO NOT TAKE INTERNALLY**

**KEEP OUT OF REACH OF CHILDREN**

**FOR INDUSTRIAL USE ONLY**

**REFER TO MATERIAL SAFETY DATA SHEET FOR FURTHER INFORMATION**

**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 or guarantees as to the end results.

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