SHERWIN-WILLIAMS

AEROSPACE COATINGS

PRODUCT DATA

# Semi-Gloss High Solids Polyurethane Topcoat

## MIL-PRF-85285F, Type I and IV, Class H

## F92 Series

### ADVANTAGES

- MIL-PRF-85285F, Type I Type I and IV, Class H
- Simple 2:1 mix ratio
- Semi-gloss
- Contains less than 3.5 lbs/gal. (420 g/L) of VOC.
- Very low HAPS content <3% by weight
- Good anti-sag characteristics
- Free of lead and chromate hazards
- Two-Component system
- Available in AMS-STD-595 semi-gloss colors.



### DESCRIPTION

MIL-PRF-85285F, Type I and IV, Class H coatings are two-component topcoats designed as a finish coat for military aircraft and equipment. Sherwin-Williams F92 series meets the MIL-PRF-85285F, Type I and IV, Class H composition and performance specifications and is sold as a semi-gloss.

### COATING PROPERTIES

| | Base Component | Admixed |
|---|---|---|
| **Solids:** | | |
| By weight | 49.0-54.0% | 46.0-49.0% |
| By volume | 41.0-43.0% | 41.0-43.0% |
| **Wt./Gal.** | 8.6-9.8 lbs./gal | 9.2-9.9 lbs./gal |
| **Sp. Gravity** | 1.03-1.18 | 1.10-1.20 |

| | |
|---|---|
| **Viscosity–Sprayable** | |
| #4 Ford Cup | 14-18 seconds |
| **Admixed V.O.C.** | |
| U.S. Exempt Solvent | <3.50 lbs./gal (420 g/L) |
| Non-Exempt Solvent | <5.10 lbs./gal (612 g/L) |
| **Useable Pot Life** | |
| at 77°F / 25°C, 0-65% R.H. | 4 Hours |
| **Gloss:** | |
| 60 degree | 15-45 units |
| **Theoretical Coverage** | |
| Per dry mil | 660-680 $ft.^2$ / gal. |
| Per 25 microns | 16.2-16.7 $m^2$ / L |
| **Dry Film Weight** | |
| Per dry mil | 0.006-0.008 lbs. / $ft.^2$ |
| Per 25 microns | 30.7-35.5 g / $m^2$ |

### SHELF LIFE

Shelf Life is applicable only for materials stored in unopened and undamaged original factory filled containers.

Minimum Storage Temp: 35ºF / 1.7ºC
Maximum Storage Temp: 115ºF / 46ºC

| | |
|---|---|
| Product Number (F92 Series) Base Component: | 1 year |
| CM0893H31 Catalyst | 2 years |

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## SURFACE PREPARATION

**Primers must be applied under the MIL-PRF-85285 topcoats.**
For **non-ferrous** substrates, use MIL-PRF-22337, Type I, Class C2, CM0724933 or E90G203. **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.

**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.

## MIXING INSTRUCTIONS

Shake color component for 10 minutes before admixing.

Admix by Volume:

| | |
|---|---|
| **2 Parts** | Component A<br>F92 Series Colors |
| **1 Part** | Component B<br>CM0893H31 |

It is recommended to filter strain admixed and reduced paint before placing material in containers for spraying.

Admixed product should be allowed a 30-minute induction time for optimum application performance.

## Solvent Addition (Optional) 12 HR Mix Only

Up to ½ part of solvent CM0110933 may be used to improve application characteristics. This addition MAY exceed your local VOC allowance. Dry, cure, & over coating times remain unaffected. Consult your customer before use.

## APPLICATION

This product can be applied using conventional air spray, HVLP, Graco electrostatic airspray or air assisted airless equipment. Please consult your Sherwin-Williams representative for specific equipment settings.

1. Make sure pots, guns, and lines are purged and cleaned.
2. Mix thoroughly and filter strain before spray applying.
3. Equipment Settings (i.e. Conventional settings):
   Spray atomizing pressure: 50-60 psi (3.45-4.15bar)
   Pot pressure: 10-12 psi (0.69-0.83 bar) using a 60' fluid hose (3/8" diameter)
   Delivery Rate: 8-10 fluid oz (236-295 mL) per minute
3. Always air-blow and tack-wipe the surfaces to be painted. Electrostatic users: Ensure that the aircraft is properly grounded for potential static buildup.
4. Best application results are obtained by applying two medium wet box coats. A flash or "tack-off" period of 30-60 minutes (75°F / 25°C and 50% RH) between box coats is required.
5. If the dry time between coats exceeds 24 hours after dry to tape, the surface should be thoroughly abraded with 240 or 320 grit sandpaper and/or red abrasive pads.
6. Recommended dry film thickness is 1.7-2.3 mils. Some colors may require thicker films to achieve complete hiding.

NOTE: Application of these product systems requires recommended temperature / humidity conditions and film thickness ranges. The material, hangar, and aircraft skin temperature should be no lower than 55ºF / 13ºC before, during, and after application.

## DRYING SCHEDULE

Dry times are based on the dry film thickness of 1.7 – 2.3 mils and mixed according to the mixing instructions identified above.

**Air Dry Times** (75°F / 25°C and 50% RH)

| | |
|---|---|
| Tack Free | 3-4 Hours |
| To Tape | 6-9 Hours |

**Recoat Time:** (maximum) 24 Hours

NOTE: Lower temperatures, heavy film thickness, improper activator range selection and poor air movement will extend the dry time.

## EQUIPMENT CLEANUP

Clean tools/equipment immediately after use with MIL-T-81772, Type I. Follow manufacturer's safety recommendations when using any solvent.
Use clean Ketone–type solvents such as CM0110308 MEK. Do not allow material to cure inside equipment.

## PRODUCT INFORMATION

Confirm compliance with national, state, and local air quality rules before use.

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 result.