

# DeSoto® 823-011 Integral Fuel Tank Coating

## TECHNICAL DATA SHEET

### Product Description

DeSoto® 823-011 Integral Fuel Tank Coating is used to protect the interior of an aircraft's fuel tank against corrosion from fuel contaminants. 823-011 is a chemically-cured coating which provides maximum protection against water, salt water, aircraft fuels, hydraulic fluids, engine oils, and dilute acid solutions.

- Excellent adhesion to aluminum
- Compatible with fuel tank sealants
- Exceptional fluid resistance
- Superior durability
- Compatible with all current non-electrostatic spray equipment
- Service temperature -54°C to 177°C (-65°F to 350°F)

### Components



#### Mix ratio (by volume):

- |                                 |         |
|---------------------------------|---------|
| • 823-011 (base component)      | 4 parts |
| • 910-099 (activator component) | 1 part  |
| • 020-037 (thinner component)   | 4 parts |

### Specifications



823-011 coating is qualified to:

- |                       |                      |
|-----------------------|----------------------|
| • 207-9-440           | • DMS 1850           |
| • 5PTMRL14            | • FMS-1046A          |
| • AMS-C-27725 Type II | • GAMPS 3102 Type 2  |
| • BAC 5793            | • MIL-C-27725 Type 2 |
| • BMS 10-101 Class A  | • MS-194             |

*Note: PPG Aerospace recommends you check the most recent specification QPLs for updated information.*

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## Product Compatibility:

823-011 is compatible with the following sealant specifications:

- 207-6-466
- ACS-MRS-7006
- AMS 3265
- AMS 3276
- AMS 3277
- AMS 3281
- AMS-S-8802
- HMS 16-1097
- FMS 1044
- FMS 3064
- DMS 2082
- GMS 4115
- MS-402
- MMS332

## Surface Preparation and Pretreatments



DeSoto<sup>®</sup> 823-011 Integral Fuel Tank coatings can be applied over clean, dry, intact aluminum surfaces. Aluminum surfaces shall be treated with materials conforming to MIL-C-5541 or equivalent.

## Instructions for Use



### Mixing Instructions:

Prior to mixing, thoroughly shake the base component. Add the activator to the base component and stir well, and add the thinner component while stirring. Maintain constant agitation for 10 minutes to ensure proper mixing. Induction time is required.

*Note: It is important to condition the paint for 24 hours prior to mixing by placing all materials in the shop or hangar, with ambient temperatures between 13°C to 35°C (55°F to 95°F). The minimum temperature of the paint components should be 13°C (55°F) prior to mixing.*



### Induction Time:

Temperature	13-21°C (55-70°F)	22-28°C (71-84°F)	>29°C (>85°F)
Induction Time Required	45 minutes	30 minutes	15 minutes

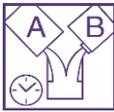
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**Viscosity:** (23°C/73°F)

- |                         |                  |
|-------------------------|------------------|
| • #2 Signature Zahn cup | 15 to 26 seconds |
| • #4 Ford cup           | 10 to 20 seconds |
| • ISO 4mm cup           | 17 to 40 seconds |
| • BSB3 cup              | 24 to 42 seconds |
| • BSB4 cup              | 14 to 24 seconds |
| • AFNOR #2.5 cup        | 41 to 87 seconds |
| • AFNOR #4 cup          | 14 to 22 seconds |

*Note: Viscosities quoted are typical ranges obtained when using specified mix ratio.*



**Pot Life:**

8 hours @ 21-25°C (70-77°F)

## Application Guidelines

**Recommended Application conditions:**

Temperature	15-30°C (59-86°F)
Relative Humidity	10-90%

**Application:**

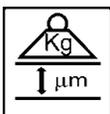
Ground the aircraft and the application equipment before priming. Stir the coating slowly during the application. The suggested film thickness is 20 to 30 microns (0.8 to 1.2 mils). This can be accomplished with one medium coats with a 50% overlap.

*These application guidelines represent PPG's best advice in standard conditions. Some parameters will be influenced by environmental conditions, equipment settings, and other variables.*



**Theoretical Coverage:**

10 square meters/liter at 25 microns dry film (421 square feet/gallon at 1 mil dry film)  
Recommended dry film thickness; 20 to 30 microns (0.8 to 1.2 mils)



**Dry Film Density:**

1.64 grams/cubic centimeter (13.66 pounds/gallon)

**Dry Film Weight:**

41 grams/square meter at 25 microns dry film (0.00850 pounds/square feet at 1 mil dry film)

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### Equipment:

823-011 is compatible with all forms of non-electrostatic spray equipment.

Equipment Type	Tip Size	Pot Pressure	Atomization Pressure at the Cap
High Volume Low Pressure Spray Gun (HVLP)	1.0 mm to 1.4 mm	10 to 20 psi (0.69 to 1.4 bar)	10 psi maximum (0.69 bar)
Conventional Air Spray Gun	1.2 mm to 1.8 mm	10 to 20 psi (0.69 to 1.4 bar)	45 to 60 psi (3.1 to 4.1 bar)

### Equipment Cleaning:

Clean spray equipment as soon as possible after use. Flush spray equipment with DeSoto<sup>®</sup> CN20, DeSoto<sup>®</sup> CN44, or Desoclean<sup>™</sup> 45 high performance solvent cleaner.

## Physical Properties (product)



**Color:** Yellow



**Gloss:** Not Applicable



Dry Times at 10-90% R.H.	13-21°C (55-70°F)	22-28°C (71-84°F)	>29°C (>85°F)
Tack Free	3 hours	2 hours	1 hour
Dry Hard	36 hours	24 hours	18 hours
Full Cure	14 days	14 days	14 days

Accelerated cure at minimum 10-50% R.H. at 60°C (140°F):

Dry hard

Flash off for 2 hours, then force cure for 3-4 hours

Full cure

Flash off for 2 hours, then force cure for 24-36 hours

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## VOC

### VOC:

Mixed, ready for use VOC (EPA method 24)	650 grams/liter
Base Component	518 grams/liter
Activator Component	118 grams/liter
Thinner Component	832 grams/liter



### Flash point closed cup:

Base Component	7°C (45°F)
Activator Component	-6°C (22°F)
Thinner Component	-1°C (31°F)

### Shelf Life:

12 months from date of manufacture to most OEM material specifications. Consult the specification to verify shelf life requirements.

24 months from date of manufacture for PRC-DeSoto Standard.

*Note: The coating shelf life is provided for original, unopened containers.*

*Note: The application and performance property values above are typical for the material, but not intended for use in specifications or for acceptance inspection criteria because of variations in testing methods, conditions and configurations.*

## Storage Recommendations



Inspect the condition of the container to ensure compliance. The material should be stored at temperatures between 5°C to 35°C (41°F to 95°F) to ensure shelf life.

*Note: When procuring to a qualified material specification, follow those storage instructions.*

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## Health Precautions

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Safety Data Sheet (SDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An SDS is available on request. Avoid overexposure. Obtain medical care in case of extreme overexposure.

**For industrial use only. Keep away from children.**

**Additional information can be found at: [www.ppgaerospace.com](http://www.ppgaerospace.com)**

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