



DeSoto® 823-011 Integral Fuel Tank Coating

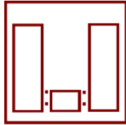
TECHNICAL DATA SHEET

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, titanium, and stainless steel
- 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
- 5PTMRL14
- AMS-C-27725 Type 2
- BAC 5793
- BMS 10-101 Class A
- DMS 1850
- FMS-1046A
- GAMPS 3102 Type 2
- MIL-C-27725 Type 2
- MS-194

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

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

DeSoto[®] 823-011 Integral Fuel Tank Coating

Surface Preparation and Pretreatments



DeSoto[®] 823-011 Integral Fuel Tank Coatings can be applied over clean, dry, intact aluminum, steel, and titanium 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 ° and 35 °C (55 ° to 95 °F). The minimum temperature of the paint components should be 13 °C (55 °F) prior to mixing.



Induction Time:

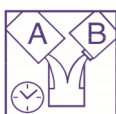
Temperature	13 - 21 °C (55 - 70 °F)	22 - 28 °C (71 - 84 °F)	>29 °C (>85 °F)
Induction Time Required	45 minutes	30 minutes	15 minutes



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)

DeSoto[®] 823-011 Integral Fuel Tank Coating

Application Guidelines

Recommended Application conditions:

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

Application:

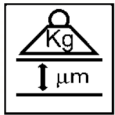
Ground the aircraft and the application equipment before priming. Stir the coating slowly during the application. The suggested film thickness is 20 to 30 microns (0.8 to 1.2 mils). This can be accomplished with one medium coats with a 50% overlap.

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)



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[®] CN20, DeSoto[®] CN44, or Desoclean[™] 45 high performance solvent cleaner.



DeSoto[®] 823-011 Integral Fuel Tank Coating

Physical Properties (product)



Color: Yellow



Gloss: Not Applicable



Dry Times @ 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% to 50% RH:

Dry hard

Flash off for 2 hours, then force cure for 3 - 4 hours at 60 °C (140 °F)

Full cure

Flash off for 2 hours, then force cure for 24 - 36 hours at 60 °C (140 °F)



VOC (EPA method 24):

Mixed, ready for use VOC	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)



DeSoto[®] 823-011 Integral Fuel Tank Coating

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.



DeSoto[®] 823-011 Integral Fuel Tank Coating

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

For sales and ordering information call the local PPG office at the numbers listed below:

Asia Pacific

ASC – Australia

Tel 61 (3) 9335 1557
Fax 61 (3) 9335 3490

ASC – Japan

Tel 81 561 35 5200
Fax 81 561 35 5201

ASC – South East Asia

Tel 65 6861 1119
Fax 65 6861 6162

ASC – Suzhou

Tel (86-512) 6661 5858
Fax (86-512) 6661 6868

ASC – Tianjin

Tel (86-022) 2482 8625
Fax (86-022) 2482 8600

Americas

1 (818) 362-6711 or 1-800-AEROMIX

Europe and Middle East

ASC – Central Europe

Tel 49 (40) 742 193 10
Fax 49 (40) 742 139 69

ASC – Middle East & India

Tel (971) 4 883 9666
Fax (971) 4 883 9665

ASC – North Europe

Tel 44 (0) 1388 770222
Fax 44 (0) 1388 770288

ASC – South Europe

Tel 33 (0) 235 53 43 71
Fax 33 (0) 235 53 54 44

Desoclean and DeSoto are trademarks of PRC-DeSoto International, Inc.

All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and assumes all risks and liability resulting from his use of the product. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.

PRC-DeSoto International, Inc.

12780 San Fernando Road
Sylmar, CA 91342

www.ppgaerospace.com

Issue Date: 7/14
Lit: 1003