

# DuPont Industrial Nonstick Coatings

## 3-COAT SPRAY-ON PREMIUM SYSTEM

### Product Information

DuPont Industrial Nonstick Coatings are aqueous dispersions that are uniquely blended multi-coat systems of Teflon® PTFE (polytetrafluoroethylene), Teflon® FEP (fluorinated ethylene propylene copolymer), and Teflon® PFA (perfluoroalkoxy) to optimize performance. The exceptional properties provide superior abrasion resistance and extend service life.

### Property Data

Product Code	Primer 857G-040	Midcoat 857G-140	Topcoat 857G-240
<b>Properties<sup>1</sup></b>			
Color	Black	Black	Clear
System Color	–	Sparkling Black	–
Coverage, <sup>2</sup> m <sup>2</sup> /kg (m <sup>2</sup> /L) (ft <sup>2</sup> /gal)	4.68 (5.62) (229)	6.82 (9.14) (373)	7.11 (9.31) (379)
Coverage at DFT, <sup>3</sup> m <sup>2</sup> /kg (ft <sup>2</sup> /gal)	14.62 (716) (at 8μ)	9.48 (517) (at 18μ)	19.74 (1054) (at 9μ)
Viscosity, <sup>4</sup> centipoises	190 - 370	380 - 570	285 - 470
Volume Solids, %	13.1 - 14.9	22.0 - 23.9	22.2 - 24.3
Weight Solids, %	26.0 - 30.7	39 - 43	38.2 - 42.2
Density, kg/l (lbs/gal)	1.20 (10.03)	1.34 (11.18)	1.31 (10.93)
VOC content, Europe, g/kg	84.05	0.50	0.70
Maximum In-Use Temperature, °C (°F)	260 (500)	260 (500)	260 (500)
Flash Point, SETA closed cup, °C (°F)	None	None	None

<sup>1</sup>Physical constants are averages only and are not to be used as product specifications. They may vary up to 5% of the values shown

<sup>2</sup>Theoretical coverage at dry film thickness (DFT) of 1.0 mils (25μ) based on 100% application efficiency. It does not take normal production losses into account

<sup>3</sup>Theoretical coverage at given dry film thickness (DFT) and based on 100% application efficiency. It does not take normal production losses into account

<sup>4</sup>Brookfield RVT (Measured with spindle 2 at 20 RPM/25 °C)



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## Application Method

Substrate	required	Rolled and cast aluminum. Stainless steel.
Surface Preparation	recommended	Degrease, grit blast and suitable hard base treatment is recommended for aluminum. <b>Rolled:</b> Defined profile curve has to be met by alkaline / alkaline-acid cleaning or by light gritblasting. / <b>Cast:</b> light gritblast / <b>Stainless Steel:</b> Gritblast Ra value: 120 μinch or 2.6 microns
Filtering	required	Primer: Filter with 60# (appr. 250μ) stainless steel or nylon mesh. Topcoat and Midcoat: Filter with 100# (appr. 150μ) stainless steel or nylon mesh
Application	recommended	Spray on. Air pressure of 3-5 kg/cm <sup>2</sup> and fluid delivery pressures of 0.8-1.2 kg/cm <sup>2</sup> . HVLP gun air has to be increased. Primer sprayed preferably with conventional spray gun. Primer has to be stirred in the pressure pot at 30 rpm during application.
Product DFT*	recommended	PRIMER: 7 – 9μm (0.3 – 0.4 mils)    MIDCOAT: 16 – 20μm (0.6 – 0.8 mils)    TOPCOAT: 8 – 10μm (0.3 – 0.4 mils)
Total DFT*	required	TOTAL: min. 35μm (1.4 mils)
Volume Ratio	recommended	PRIMER: 32 %                                  MIDCOAT: 47 %                                  TOPCOAT: 21 %
Drying	recommended	Primer: Force dry (Ref. 5-10 min. at 120-150 °C (248-302 °F) ). Temperature of primer between 35-45 °C (95-113 °F) before application of mid- and topcoat. Application of the midcoat and topcoat wet on wet.
Curing	required	Total system: minimum 5 min. at 427 °C (800 °F) or 3 min. at 435 °C (815 °F) ( metal temperature ). Peak temperature should not exceed 440 °C (824 °F).
Clean up	recommended	Water
Thinner/Additive	required	Water

\* Dry Film Thickness. Measured with Dual probe ED10 used in combination with the Dualscope MP20 and MP40 E-S

All recommendations are based upon best knowledge

## Handling and Storage

- Primer & Midcoat: Gently mix (15 min at 30RPM) before use
- Topcoat: Stir with spatula or gently mix (15 min at 30RPM) before use
- Storage life is 12 months at room temperature (18 °C-27 °C)
- Water-based product, protect from freezing.
- For medical application and development, consult DuPont.

For detailed information on health and safety, refer to the Material Safety Data Sheet and the latest edition of "The Guide to the Safe Handling of Fluoropolymer Resins," published by The Society of the Plastics Industry, Inc. [www.fluoropolymers.org](http://www.fluoropolymers.org)) or by PlasticsEurope ([www.plasticseurope.org](http://www.plasticseurope.org)).

## Food Contact

This coating system is designed to be used in direct contact with food. Applied according to the application method and instructions on this fact sheet, the fully cured coating will comply with US FDA food contact regulations in 21CFR and can be sold and/or used for food contact applications for nonstick coatings in Europe following the national legislations of each European country, having specific regulations for this category of coatings (nonstick, high temperature resistant). Any changes or variations of individual coating thickness from what is indicated in this fact sheet should be assessed for food contact applications prior to its use. For details and information please contact your DuPont representative.

In Europe, in the case of incomplete compliance in one country, the product can, on the basis of its full compliance in at least one Member State of the European Union, be used for direct food contact in all Member States according to the Article 28-30 (ex Article 30-36) of the Treaty of Rome as amended.

Compositional statements, referring to relevant national legislation, are available on request.

## Disposal and Other Considerations

Please follow these disposal guidelines as outlined in "The Guide to the Safe Handling of Fluoropolymer Resins," (available at [www.fluoropolymers.org](http://www.fluoropolymers.org) for download):

- All treatment, storage, transportation, and disposal of this product and/or container must be in accordance with applicable national and local regulations.
- Do not discharge aqueous dispersions to lakes, streams or waterways.
- Separate solids from liquid by precipitation and decanting or filtering. Dispose of dry solids in a landfill that is permitted, licensed or registered to manage industrial solid waste. Discharge liquid filtrate to a wastewater treatment system.
- Incinerate only if incinerator operates at 800 °C or higher and is capable of scrubbing out hydrogen fluoride and other acidic combustion products.
- Industrial fluoropolymer waste containing additives such as solvents, primers or thinners must be regarded as special waste. Companies should contact their local waste disposal authorities for details of the relevant waste disposal regulations.
- Empty containers should preferably be cleaned and recycled. If this is not possible, the containers should be punctured or otherwise destroyed before disposal.

**For more information on DuPont Industrial Nonstick Coatings:**  
[www.teflon.com/industrial](http://www.teflon.com/industrial)

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