

# DuPont™ Teflon®

## Industrial Coatings

### **Teflon® S Premium Nonstick Coatings** **954-100, 954-101 and 954-103**

#### **Description**

These *Teflon® S* single coat, nonstick and dry lubricant finishes are designed for relatively low-temperature curing, suitable for use in conditions of mild abrasion, relatively low operating temperatures and moderate chemical/corrosion potential. The higher level of *Teflon®* fluoropolymer in this coating enhances lubricity.

#### **FDA Status**

The *Teflon® S* 954-line does not comply with FDA regulations governing components of coatings for direct food contact.

Use conventional industrial spray equipment. Reduce to spray viscosity with TN-8748 atomizing pressure should be 40 psi.

Electrostatic application is possible, however a non-polar solvent, such as xylene or TN-8748, must be added in the following ratios to increase resistivity. Ratio is per 100 parts 954-100 series product, and will give a resistivity of 0.05–0.10 megaohms and spray voltage of 60-65 kV.

	Xylene	or	TN-8748
100 parts 954-1xx	40-60		50

See “Applying *Teflon®* Coatings” fact sheet.

**Table 1**  
**Typical Properties**

Product Code	954-100	954-101	954-103
Color	Unpigmented	Green	Black
Weight Solids, %	51.4	54.0	49.0
Volume Solids, %	38.0	36.9	36.1
Density, lb/gal	9.2	9.5	9.2
(kg/L)	1.11	1.14	1.10
Coverage, ft <sup>2</sup> /gal*	610	592	580
(m <sup>2</sup> /L)*	15.2	14.8	14.5
Viscosity, cP	200–900	200–700	200–500
Maximum Use Temperature, °C (°F)	Continuous: 150 (300) Intermittent: 165 (325)		

**Note:** These figures are averages and may vary.

\* Theoretical coverage at 25 µm (1 mil) assuming 100% application efficiency.

#### **Application**

Roll or mix with a propeller-type mixer until contents are homogeneous.

Strain through 150-mesh wire screen or cheese cloth.

These products are recoatable and can be applied in multiple coats. See *Cure* section for cure conditions.

#### **Surface Preparation**

Apply over clean, roughened surface. Any residual oil on the surface will affect the color of the cured film and will adversely affect adhesion.

Corrosion resistance is improved when coating is applied over phosphated steel.

#### **Film Thickness**

13–25 µm (0.5–1.0 mil) DFT.

#### **Cure**

All temperatures refer to metal temperature.

Force dry 10 min. to drive off volatile substances.

#### **Single Coat**

Recommended: 20 min. at 260°C (500°F)

Minimum: 20 min. at 232°C (450°F)

**Note:** Higher bake temperature at 288°C (550°F) for 20 min. will provide best corrosion and chemical resistance, but with noticeable film discoloration.

#### **Multiple Coats**

Initial and intermediate coats: 15 min. at 150°C (300°F)

Final coat: Recommended: 20 min. at 260°C (500°F)

Minimum: 20 min. at 232°C (450°F)

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## Storage and Stability

Shelf life of at least 18 months when stored at normal room temperature, 18°–24°C (65°–75°F).

Material may be exposed briefly to temperatures outside the suggested temperature range without harm. In such cases, check product and properties before extensive use.

## Safety

Follow normal industrial safety practices for handling and applying *Teflon*® products. Industrial experience has clearly shown *Teflon*® materials can be processed and used at elevated temperatures without hazard providing adequate ventilation is used. Ventilation should

be available at baking temperatures of 275°C (525°F) and above. Before using *Teflon*®, read the Material Safety Data Sheet (MSDS) and the detailed information in the "Guide to the Safe Handling of Fluoropolymer Resins," latest edition, published by the Fluoropolymers Division of The Society of the Plastics Industry.

When grit-blasting *Teflon*® finishes off aluminum or magnesium surfaces, the possibility of explosion exists if the fines are allowed to heat up. Good house-keeping practices, keeping the residue wet, and keeping the ventilation and dust collection systems in good working order reduces this risk.

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## For more information on Teflon® coatings:

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**CAUTION:** Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement," H-50102.

