

# 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.

**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.

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.

#### **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)

The DuPont Oval Logo, The miracles of science®, and Teflon® are trademarks or registered trademarks of E.I. du Pont de Nemours and Company.

Use of DuPont trademarks is subject to License Agreement and qualification.

## 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.

---

## For more information on Teflon® coatings:

DuPont  
*Teflon*® Nonstick & Industrial Coatings  
Chestnut Run Plaza  
P.O. Box 80702  
Wilmington, DE 19880-0702

**(800) 441-7515**  
**Fax: (302) 366-8602**  
**[www.dupont.com/teflon/coatings](http://www.dupont.com/teflon/coatings)**

---

### Europe

DuPont de Nemours (Belgium)  
A. Spinostraat 6  
B-2800 Mechelen  
Belgium  
Tel.: 33-15-441188  
Fax: 33-15-441160

### Pacific

DuPont Australia, Ltd.  
254 Canterbury Road  
Bayswater, Victoria 3153  
Australia  
Tel.: 61-3-9721-5617  
Fax: 61-3-9721-5690

### Japan

DuPont K. K. (*Teflon*® Finishes)  
4th Floor, Chiyoda Honsha Building  
5-18 Sarugaku-cho, 1-chome  
Chiyoda-ku, Tokyo, 101 Japan  
Tel.: 81-3-5281-5888  
Fax: 81-3-5281-5899

---

### Asia

DuPont China, Ltd.  
26/F., Tower 6, The Gateway  
9 Canton Road, Tsimshatsui  
Kowloon, Hong Kong  
Tel.: 852-2734-5459  
Fax: 852-2368-3512

DuPont Korea  
4/5th Floor Asia Tower  
#726 Yeoksam-dong, Kangnam-ku  
Seoul, Korea  
Tel.: 82-2-2222-5385  
Fax: 82-2-2222-5478

---

The information set forth herein is furnished free of charge and is based on technical data that DuPont believes to be reliable. It is intended for use by persons having technical skill, at their own discretion and risk. The handling precaution information contained herein is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards. Because conditions of product use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. As with any material, evaluation of any compound under end-use conditions prior to specification is essential. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

**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.

