



DUPONT™ 5065

SILVER CONDUCTOR

PRODUCT DESCRIPTION

DuPont™ 5065 silver conductor was developed for the Printed Electronics market and is particularly well suited for RFID applications where low as-printed resistance is a requirement. This product uses a unique combination of Ag powder and resin technology providing superior conductivity and performance. This composition is solvent-based and was designed to be screen printed in semi-automatic or high volume reel-to-reel applications.

PRODUCT BENEFITS

- Good printability
- Superior RFID performance in UHF and HF range (with low and high track thickness respectively)
- Outstanding electrical conductivity
- High paste coverage
- Excellent adhesion to various substrates

PROCESSING

Screen Printing Equipment

Reel-to-reel, semi-automatic, manual

Substrates

Polyester, paper, card

Screen Type

Polyester, stainless steel

Typical Drying Conditions

Static box oven: 130°C/10 min

Reel-to-reel: 140°C/2 min

Typical Circuit Line Thickness

Printed with 200mesh polyester screen: 10-12 µm

Clean-Up Solvent

Ethylene diacetate or Methyl propasol acetate

Table 1-Composition Properties

Test	Properties
Solids, (%)	68 - 71
Viscosity, (Pa.s) [0.5xRVT, spindle#14, 10rpm]	12 - 27
Thinner	DuPont™ 8260
Shelf Life (months)	6

**Table 2-Typical Physical Properties
Printed on 125µm PET film**

Test	Properties
Resistivity (mΩ/sq/25µm)	<10
Coverage (cm ² /g) [using screen type 200 mesh polyester]	170
Abrasion Resistance (H) [ASTM pencil hardness]	5
Adhesion (B) [ASTM x-hatch, no material removal]	5

Tables 1 and 2 show anticipated typical physical properties for DuPont™ 5065 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

Drying

Dry in a well-ventilated box oven or belt/conveyor furnace. Air flow and extraction rates should be optimized to ensure complete removal of solvent from the paste. A strong air flow may help to reduce the drying temperature/time considerably and to achieve the lowest as-printed resistance.



DUPONT™ 5065 SILVER CONDUCTOR

STORAGE AND SHELF LIFE

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature (<25°C). Shelf life of material in unopened containers is six months from date of shipment. Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

SAFETY AND HANDLING

For Safety and Handling information pertaining to this product, read the Material Safety Data Sheet (MSDS).

FOR MORE INFORMATION ON DUPONT™ 5065 OR OTHER DUPONT MICROCIRCUIT MATERIALS, PLEASE CONTACT YOUR LOCAL REPRESENTATIVE:

Americas

DuPont Microcircuit Materials
14 TW Alexander Drive
Research Triangle Park, NC 27709
USA
Tel +1 800 284 3382 (calls within USA)
Tel +1 919 248 5188 (calls outside USA)

Europe, Middle East & Africa

Du Pont (UK) Ltd
Coldharbour Lane
Bristol BS16 1QD
UK
Tel +44 117 931 3191

Asia

Du Pont Kubushiki Kaisha
MCM Technical Lab
DuPont Electronics Center
KSP R&D B213, 2-1,
Sakado 3-chome, Takatsu-ku,
Kawasaki-shi, Kanagawa, 213-0012
Japan
Tel +81 44 820 7575

DuPont Taiwan Ltd
45, Hsing-Pont Road
Taoyuan, 330
Taiwan
Tel +886 3 377 3616

DuPont China Holding Company Ltd
Bldg. 11, 399 Keyuan Road
Zhangjiang Hi-Tech Park
Pudong New District
Shanghai 201203
Tel +86 21 3862 2888

DuPont Korea Inc.
3-5th Floor, Asia tower #726
Yeoksam-dong, Gangnam-gu
Seoul 135-719, Korea
Tel +82 2 2222 5275

E.I. DuPont India Private Limited
7th Floor, Tower C, DLF Cyber Greens
Sector-25A, DLF City, Phase-III
Gurgaon 122 002 Haryana, India
Tel +91 124 409 1818

Du Pont Company (Singapore) Pte Ltd
1 HarbourFront Place, #11-01
HarbourFront Tower One
Singapore 098633
Tel +65 6586 3022

mcm.dupont.com

Copyright © 2015 DuPont. All rights reserved. The DuPont Oval Logo, DuPont™, and all DuPont products denoted with ® or ™ are registered trademarks or trademarks of E. I. du Pont de Nemours and Company or its affiliates.

This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experiments. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. This information may be subject to revision as new knowledge and experience becomes available. Since we cannot anticipate all variations in end-use conditions, DuPont makes no warranties, and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.

CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement," H-50102-5 K-28888 (5/15)