

DuPont 5036

ENCAPSULANT/BLEND MEMBER/HEAT SEAL

Technical Data Sheet

Product Description

Polymeric composition DuPont 5036 is solvent-based, screen-printable ink used for heat-sealing circuitry and encapsulant application. It offers the advantages of rapid-curing while maintaining adhesion to both polyester and/or conductors. DuPont 5036 may be used as a blend member for DuPont 7102 and DuPont 7082 carbon conductors. Heat sealing conditions will vary depending on equipment used. A general recommendation would be to cure as directed below, followed by heat-sealing at 120-125°C.

Product Benefits

- Solvent based protection layer, can be used as barrier for graphic ink overprint

Processing

- **Screen Printing Equipment**
Semiautomatic and manual
- **Substrates**
Polyester, polyimide, epoxy glass
- **Ink Residence Time on Screen**
> 2 hours
- **Screen Types**
Stainless steel, Polyester
- **Cure Conditions**
120° -130°C/5 minute
- **Typical Thickness (after cure) Printed with 200-325-mesh stainless steel screen**
0.5 - 1.0 mil
- **Clean-up Solvent**
Methyl propyl acetate

Dry

Dry and cure in a well ventilated oven or conveyor dryer where the exhaust meets environmental regulations.

Table 1
Typical Physical Properties on Polyester Film

| Test | Properties |
|---|--------------------------------|
| Adhesion Crosshatch (ASTM D2259-78) Dielectric to Polyester Scotch Tape #600 (B) Conductor to Dielectric | No transfer (5) No transfer |
| Abrasion Resistance, Pencil Hardness (ASTM D3363-74) [H] | ≥ 1 |
| Operating Use Temperature (°C) (dependent on conductor) | ≤ 90 |
| Flexibility (180° crease over DuPont 5007) | No opens |
| Breakdown Voltage (V/mil DC) (ASTM D150) | 500 |
| Dielectric Constant (@ 1kHz) (ASTM D150) | < 5 |
| Insulation Resistance (GΩ/sq/mil) | > 10 |

Table 2
Composition Properties

| | |
|---|-------------|
| Viscosity (Pa.S) [Brookfield RVT, 10rp, #14 spindle, 25°C] | 25 - 45 |
| Solids (150°C) [%] | 28 - 30 |
| Thinner | DuPont 3610 |
| Density, g/cm ³ | 1.08 |
| Color | Colorless |

Table 1 & 2 show anticipated typical physical properties for DuPont 5036 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

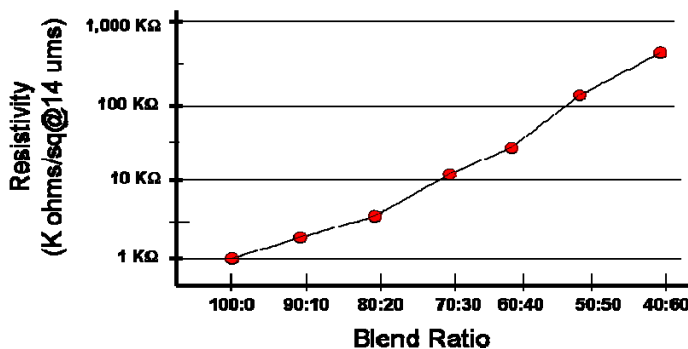
Storage and Shelf Life

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).

Blending for Value
7082/5036 Blend Curve
(1,000 Ω– 550,000 Ω/sq@14ums)



Copyright © 2009 DuPont. All rights reserved. The DuPont Oval, DuPont™, The miracles of science™, Green Tape™ and all products or words denoted with ® or ™ are registered trademarks or trademarks of E. I. du Pont de Nemours and Company or its affiliates (“DuPont”). NO PART OF THIS MATERIAL MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM OR TRANSMITTED IN ANY FORM OR BY ANY MEANS ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF DUPONT.

Caution: Do not use in medical applications involving implantation in the human body or contact with internal body fluids or tissue unless the product is provided by DuPont under a formal written contract consistent with the DuPont Policy Regarding Medical Applications of DuPont Materials H-50103-2 (“Medical Applications Policy”) and which expressly acknowledges the contemplated use. For additional information, please request a copy of DuPont Medical Caution Statement H-50102-2 and the DuPont Medical Applications Policy.

The information provided herein is offered for the product user’s consideration and examination. While the information is based on data believed to be reliable, DuPont makes no warranties, expressed or implied as to the data’s accuracy or reliability and assumes no liability arising out of its use. The data shown are the result of DuPont laboratory experiments and are intended to illustrate potential product performance within a given experimental design under specific, controlled laboratory conditions. While the data provided herein falls within anticipated normal range of product properties based on such experiments, it should not be used to establish specification limits or used alone as the basis of design. It is the product user’s responsibility to satisfy itself that the product is suitable for the user’s intended use. Because DuPont neither controls nor can anticipate the many different end-uses and end-use and processing conditions under which this information and/or the product described herein may be used, DuPont does not guarantee the usefulness of the information or the suitability of its products in any given application. Users should conduct their own tests to determine the appropriateness of the products for their particular purpose.

The product user must decide what measures are necessary to safely use the product, either alone or in combination with other products, also taking into consideration the conditions of its facilities, processes, operations, and its environmental, health and safety compliance obligations under any applicable laws.

This information may be subject to revision as new knowledge and experience become available. This publication is not to be taken as a license to operate under, or recommendation to infringe any patent.



The miracles of science™

For more information on DuPont 5036 or other DuPont Microcircuit Materials products, please contact your local representative:

Americas

DuPont Microcircuit Materials
14 T.W. Alexander Drive
Research Triangle Park, NC 27709
Tel.: 800-284-3382

Europe

Du Pont (U.K.) Limited
Coldharbour Lane
Bristol BS16 1QD
U.K.
Tel.: 44-117-931-3191

Asia

DuPont Kabushiki Kaisha
Sanno Park Tower, 11-1
Nagata-cho 2-chome
Chiyoda-ku, Tokyo 100-611
Japan
Tel.: 81-3-5521-8650

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

DuPont China Holding Co. Ltd
Bldg 11, 399 Keyuan Rd., Zhangji Hi-Tech Park,
Pudong New District, Shanghai 201203, China
Tel.: 86-21-6386-6366 ext.2202

DuPont Korea Inc.
3~5th Floor, Asia tower #726,
Yeoksam-dong, Gangnam-gu
Seoul 135-719, Korea
Tel.: 82-10-6385-5399

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.: 91-124-4091818

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

<http://mcm.dupont.com>

MCM5036 (7/2012)