



DUPONT™ ME901

SILVER CONDUCTIVE ADHESIVE FOR LED-ATTACH

PRODUCT DESCRIPTION

DuPont™ ME901 is part of DuPont's suite of materials developed for In Mold Electronic applications. ME901 is a stretchable silver conductive adhesive capable of withstanding thermoforming and overmolding temperatures. This composition can be used to attach LEDs and build capacitive switches on polycarbonate substrates coated with graphic inks and/or overglaze.

PRODUCT BENEFITS

- Excellent adhesion directly on polycarbonate
- Excellent performance after thermoforming and injection molding

PROCESSING CONDITIONS

Substrates

Polycarbonate, surface treated polyester

Screen Printing Equipment

Reel-to-reel, semi-automatic or manual

Ink Residence Time On Screen

>1 Hour

Screen Types

Polyester, stainless steel

Typical Drying Conditions

On polycarbonate, minimize the time between printing/drying:

Box oven: 120°C for 20 minutes

Reel-to-reel: 120°C for 4 minutes

Typical Circuit Line Thickness

12 Microns

Printed with SD 56/36 (280 mesh) stainless steel or 61 – 64 PET Screen

Clean-Up Solvent

Ethylene glycol diacetate

Table 1-Composition Properties (Uncured)

Test	Properties
Solids (%) @ 150°C	71.0 – 75.0
Viscosity (Pa.s) [Brookfield 0.5 x RVT, #14 Spindle, 10 RPM, 25°C]	25 – 60
Thinner	DuPont™ 8270
Shelf Life (months)	6

Table 2-Typical Physical Properties (Cured)

Test	Properties
Resistivity (mΩ/sq/mil)	≤50
Resistivity After Thermoforming (mΩ/sq/mil)	≤300*
Abrasion Resistance (H) [ASTM pencil hardness]	≥H

Tables 1 and 2 show anticipated typical physical properties for DuPont™ ME901 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

*Results can vary some depending upon the degree of elongation after thermoforming.

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 combination. It will also aid in achieving the lowest as-printed resistance

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).



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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-50102-5.

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