

DuPont 5880

SILVER/SILVER CHLORIDE COMPOSITION FOR SCREEN PRINTING

Technical Data Sheet

Product Description

DuPont 5880 is a solvent-based silver/silver chloride composition designed for screen printing onto polyester film. It is suitable for use as an electrode or a reference counter electrode for electrochemical sensors.

Product Benefits

- Low electrode polarization
- High Conductivity
- Excellent stability on contact with hi salt gels

Processing Printing

DuPont 5880 should be thoroughly mixed with a plastic or coated spatula before use. If settling is found after long storage, mix and then jar-roll composition sample overnight before use. It is best to use a polyester screen when printing to minimize contact with reactive metals.

Drying

Box oven: 120°C for 8-10 minutes
Reel-to-Reel : 140°C for 3-4 minutes

Clean-up Solvent

Ethylene glycol diacetate or dipropylene glycol methyl ether.

Thinner

DuPont 8210 may be used sparingly for slight adjustments to viscosity or to replace evaporation losses. However, the use of too much thinner or of a non-recommended thinner may affect the rheological behaviour of the material and its printing characteristics.

Typical Physical Properties

| Test | Properties |
|-----------------------------------------------------------------------------------------|-------------|
| Density (g/cc) | 3.25 |
| Cross Hatch Adhesion (B) [ASTM Norm D3359078] | 5 |
| Coverage (cm ² /g) [Printed with 325 stainless steel mesh] | Approx. 200 |
| EKG Properties | |
| DC offset (mV) | <5 |
| AC Impedence (Ω) | <60 |
| Resistivity (mΩ/sq/mil) | 25 |
| Composition Properties | |
| Viscosity (Pa.S) [Brookfield 0.5 RVT, Utility cup & spindle SC4-14/6R, 10 rpm, 25°C] | 30 - 60 |
| Solids (150°C)[%] | 84.0 - 86.0 |
| Thinner | DuPont 8210 |
| Ag:AgCl ratio | 80/20 |

This table shows anticipated typical physical properties for DuPont 5880 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

Equipment Consideration

Polyester film substrates should be used. DuPont 5880 can also be printed over silver (DuPont 5000, DuPont 5025) or over carbon (DuPont 7105). Care should be taken to minimize contact of silver/silver chloride compositions with metals, especially reactive metals such as aluminum or brass, no contact should occur. Components made of these materials can be protected by taping or covering with an inert material.

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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