

# DuPont 7314

SILVER CONDUCTOR: SCREEN PRINT

## Technical Data Sheet

### Product Description

DuPont 7314 is designed for use with titanate bodies. It is used for high frequency ceramic resonator filters and other similar components. It is particularly useful for screen printing of fine top patterns and I/O pads.

### Product Benefits

- Dense fired film
- Fine line printing
- Sprint® vehicle, permitting long production runs and high squeegee speeds
- Low Resistivity
- Excellent adhesion
- Excellent solderability

### Processing

#### Printing

DuPont 7314 prints easily using 200-325 mesh stainless steel screens with 0.4-0.5 mil emulsion, at printing speeds of 10-20 cm/sec (4 - 8 in/sec).

#### Drying

Allow parts to level 5 - 10 minute at room temperature, followed by drying 15 minutes at 150°C in a well ventilated oven or belt dryer.

#### Firing

Dried parts should be fired in a well ventilated belt or conveyor furnace. A total cycle time of 1-2 hours with 10 minutes at a peak temperature of 900°C is recommended.

## Typical Physical Properties

Test	Properties
Viscosity (Pa.S) (Brookfield 2XHA, SC4-14/6R, 10 rpm, 25°C)	200-300
Solids (750°C) (%)	82.5-84.5
Fired Thickness [µm]	10-14
Thinner	DuPont 4553
Resistivity (mΩ/sq ) (@12 microns)	≤ 2.2
Adhesion <sup>1</sup> Initial (N) Aged 48 hr (N) @ 150°C	≥22 ≥22
Solder Acceptance (%) <sup>2</sup> (62Sn/36Pb/2Ag)	≥90 wetting
Shrinkage (%) Dry to Fired	50
Coverage (cm <sup>2</sup> /g) [Based on 12 microns fired film]	70

<sup>1</sup> DuPont peel adhesion test fired at 850°C on alumina substrate.

<sup>2</sup> After 5 seconds dip in 62Sn/36Pb/2Ag solder at 220°C using mildly activated flux

This table shows anticipated typical physical properties for DuPont 7314 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).

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