DuPont Microcircuit Materials

THICK FILM COMPOSITION

7307J Silver Conductor: Dip

Product Description

Silver conductor 7307J is designed for use with titanate bodies. It is used for high frequency ceramic resonator filters and other similar components. It is formulated to be applied to ceramic components by dipping. 7307J can also be applied by spraying.

Product Benefits

- Uniform coating with good coverage
- Slow settling rate
- High Q
- Excellent adhesion to titanates
- Excellent solderability

Other Compatible Compositions

- 7314 Silver Conductor
- 7342 Silver Conductor

Processing

Application

Manual or automatic dip

Drying

Allow parts to level 5 minutes at room temperature, followed by drying 15-30 minutes at 150⁰C 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 900⁰C is recommended.

Typical Physical Properties

Test	Specifications
Viscosity (Pa.s) [Brookfield 0.5RVT, #3 spindle, 10 rpm, 25°C]	3.0 - 4.0
Fired Thickness (µm)	12 - 25
Solids (750⁰C) [%]	74.0 - 76.0
Thinner	Xylene
Resistivity (µm/sq) [12u fired]	< 2.2
Adhesion on Titanate [1] (Kg)	> 9
Solder Spread [2] (mil)	115 - 165
Pick-up [3] (mg)	120 - 180

[1] 75 mil diameter nail head pull test, 62Sn/36Pb/2Ag solder

[2] 120 x 20 mil solder perform disc, 62Sn/36Pb/2Ag solder

[3] Weight of dry silver pick-up by submersion of a Brookfield #14 spindle

Table 1 shows typical physical properties for 7307J

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

The following precautions should be exercised when handling 7307J:

- Use with adequate ventilation
- Avoid prolonged contact with skin
- If contact with skin occurs, wash affected area immediately with soap and water
- Avoid prolonged breathing of vapor
- Dangerous if swallowed - DO NOT CONSUME
- Refer to MSDS for more details

United States	**Europe**	**Japan**
DuPont Microcircuit Materials	DuPont (UK) Limited	DuPont Kabushiki Kaisha
14 T.W. Alexander Drive	Coldharbour Lane	Sanno Park Tower, 11-1
Research Triangle Park, NC 27709	Frenchay	Nagata-cho 2-chome,
Tel.: 800-284-3382	Bristol BS16 1QD	Chiyoda-ku, Tokyo 100-6111
	England	Japan
	Tel.: 44-117-931-3191	Tel.: 81-35-521-8650

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