

OTech Palladium - Palladium Ink for Seed Layers for Plating and PCBs Data Sheet

Product description

OrelTech's unique process allows printing and aerosol spraying of highly conductive palladium thin films or non-connected nanoparticle islands. Printed layers undergo short development (curing) using plasma treatment resulting in a thin fine pure palladium structure. OrelTech inks in liquid form do not contain nanoparticles and are significantly environmentally friendlier than the alternatives on the market. Lack of nanoparticles also allows them to be much more cost-effective than other conductive inks.

Benefits

- Precise patterning patterning by inkjet, aerosol
- Low temperature process
- Printed on polymers, metals and fabrics
- **Pure Pd seed layer, perfect for plating**
- No solid or liquid waste
- Material saving
- Cost-efficient solution



Typical properties of the ink

OTech Jet	
Viscosity, cP	1 - 5
Shelf life, 4°C	4 months
Cure type	Cold plasma
Ink type	2-component ink
Application method	Inkjet, aerosol
Example print heads	KM 512, Samba, Epson DX5
Substrate	Plastic, paper, fabric
Appearance	Clear tea-colored liquid
Application: Seed layer for:	<ul style="list-style-type: none"> • Plating • Electrodes • PCBs • Other sensitive devices



Not for distribution

For additional questions please contact konstantin@oreltech.com

Directions for use and storage

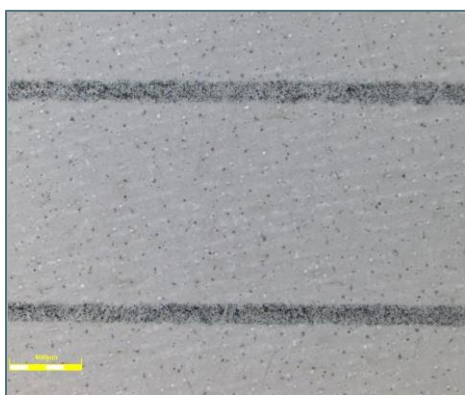
- **Storage:** Inks can be stored in closed containers in cold, dry conditions (fridge, **3°C**) for up to 4 months.
- **Clean-up:** Materials can be cleaned up using alcohols and ketones, preferably isopropanol.
- **Pre-treatment:** It is recommended to **filter (3 µm)** prior to use. In some cases, to ensure better wettability and/or adhesion, the substrate material must be pre-treated prior to ink application.

Curing conditions

- **Curing time:** 5-10 minutes.
- **Curing apparatus:** Cold plasma instrument with a low-pressure chamber (0.3-0.5 mbar).
- **Curing temperature:** Temperature in the plasma chamber does not exceed 70 °C. No additional heating is needed. That temperature can be lowered to room temperature using a temperature-controlled plasma chamber.

Typical properties of the cured film

Sheet resistance, Ω/\square (when applicable)	50
Adhesion	Tested on PET, PI, ABS
Layer thickness, nm	5 – 100+
Plating on top	Cu, Ni, others
* Depending on the desired application.	



OrelTech Palladium ultra-thin Pd seed layer printed on PET

Not for distribution

For additional questions please contact konstantin@oreltech.com