New Generation Low Temperature Silver Paste

- Ideal for both HJT and OPV standard cells
- For single and double printing application

The SOL580 has been developed based on our recent improvement in low curing temperature paste chemistry, combined with the latest breakthrough in silver powder development and organic design. As confirmed by internal results SOL580 has outstanding resistivity and improved adhesion on HJT cells.

SOL580 has a low curing temperature (180–200 °C) and allows for low resistivity values on HJT (Heterojunction with Intrinsic thin layer) solar cells. At the same time, the paste shows excellent adhesion.

Please contact our local technical service teams for detailed process recommendations.

KEY BENEFITS

- For outstanding efficiency gain
- Fine-line screen printing for mass production
- Excellent adhesion and solder ability
- Excellent resistivity values with a low curing temperature
- Can be stored at room temperature
**IMPROVEMENT ON VOLUME RESISTIVITY, PRINTING AND LINE ASPECT RATIO**

The SOL580 features a unique silver chemistry, which allows for improved resistivity values. The key is that this paste allows for improved sintering of the silver at low curing temperatures. The SOL580 is perfectly tailored for fine-line printability for screen printing. It supports a finger geometry that can print defect-free through a less than 35μm screen opening in high throughput mass production, resulting in an efficiency gain through reduced optical shading and reduced volume resistivity.

**TYPICAL PROPERTIES**

Wafer Application types:
- HJT
- OPV

Recommended finger opening:
- Single Print: 30 – 35μm

Recommended curing temperature:
- 200°C for 10 – 30 min

Recommended storage condition:
- < 25°C (Controlled Humidity)

Solid content: 92.5 ± 1.0%

Fineness of Grind (FOG):
- 4th scratch: ≤ 15μm
- 50%: ≤ 8μm

Viscosity:
SOL580: CPE-51 spindle (Brookfield):
50 – 150 kcps @ 1 RPM, 25°C

**RECOMMENDED PROCESSING GUIDELINES**

Printing:
Screen Parameter Recommendations with Stainless Steel Screen:
- ≥ 30 – 40μm opening:
  - calendared 360 mesh, 16μm
- EOM thickness: 12 – 20μm

Curing:
Typically cured in a circulated air oven furnace with set points of 180 – 200°C in 10 – 30 minutes

Storage:
DO NOT REFRIGERATE.
Store in a dry location at 5°C – 25°C. Allow paste to come to room temperature prior to opening. Spatulate well before using.

**Room-temp storage**
The SOL580 has the important characteristic that it can be kept at room temperature and not degrade over a 6 month period.

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**IMPROVEMENT ON VOLUME RESISTIVITY**

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<th>Volume Resistivity Improvement in SOL580</th>
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<td><strong>Baseline</strong></td>
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**LINE ASPECT RATIO IMPROVEMENT**

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