TECHNICAL DATA SHEET
SILVER CONDUCTIVE PASTE    BY01 SERIES

Description
BY01 series is an environmental friendly silver conductive paste designed on silicon solar cell (n+) positive electrode. The conductive component in silver paste will be the excellent ohmic contact characteristics with silicon and have good compatibilities with back aluminum paste when co-fired.

Benefits
- Good printing characteristics
- Low contact resistance
- High conductivity
- Excellent solderability
- Co-fireable with front side silver and back side aluminum
- Up to RoHS environmental regulation

Screen Mesh
250~325 BOPP Stainless Steel Screen Mesh

Typical Printing Parameters
Scraper hardness: 75-85
Rubber scraper speed: 180-280m/min
Distance between screen mesh and silicon wafer: 1500-3000μm

Typical Drying Conditions
- Chain fast burning furnace:
  280°C-350°C/20-50sec;
- Rotating drying furnace:
  180°C-250°C/8-15min

Typical Properties

<table>
<thead>
<tr>
<th>Test</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid Content (%)</td>
<td>55.5-59.5</td>
</tr>
<tr>
<td>Silver Content (%)</td>
<td>53-57</td>
</tr>
<tr>
<td>Viscosity (Pa.S) (NDJ-99, 10r/s, 25±0.5°C)</td>
<td>40-80</td>
</tr>
<tr>
<td>Finessh(μm)</td>
<td>≤15</td>
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<tr>
<td>Screen Mesh (BOPP Stainless steel)</td>
<td>250~325</td>
</tr>
<tr>
<td>Recommended Drying Conditions</td>
<td>Chain fast burning furnace: 280°C-350°C/20-50sec; Rotating drying furnace: 180°C-250°C/8-15min</td>
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<tr>
<td>Practical Peak Temperature</td>
<td>780-830°C</td>
</tr>
<tr>
<td>Wet Deposit (g/pcs) (156*156)</td>
<td>0.025-0.035</td>
</tr>
<tr>
<td>Solderability</td>
<td>Excellent</td>
</tr>
<tr>
<td>Adhesion (N)</td>
<td>≥5</td>
</tr>
<tr>
<td>Aging Adhesion (N) (150°C,30min)</td>
<td>&gt;3</td>
</tr>
<tr>
<td>Shelf Life</td>
<td>Six Months from Date of Shipment</td>
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</tbody>
</table>

Remark: 1) The typical properties for BY01 series is based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request. 2) The viscosity can be adjusted according to customer’s real condition.
Notice of Usage and Storage

Printing
Printing should be carried out in a clean, well-ventilated area, which with cleanliness of no less than 100 thousand grade. It should be guarantee that the printing room temperature remains 25±2°C during printing. The paste should be stirred fully before printing. If take out from cold closet, the product should be placed in printing room till it returned to room temperature before use. If thinner added, it is essential to fully stir the paste for ensure the performance.

Drying Condition
Chain fast burning furnace: 280°C-350°C/20-50sec, drying time is flexible in accordance with dryer type, but should not last long;
Rotating drying furnace: 180°C-250°C/8-15min

Firing Condition
Firing process is the key parameter affecting paste characteristics. It is advised to use flash burning process. The firing peak temperature should be adjusted according to fired film quality, solderability, weldability and solar cell electrical performance.

Delivery and Storage
During transportation and storage should protect against the tide and contamination. Containers may be stored in a clean, dry and stable environment at room temperature (between 5°C~25°C), with their lids tightly sealed. The shelf life of the paste is 6 months. The used material should be collected and sealed up alone. Don’t mix with other untapped material.

Compatibility
The Silicon solar cell backside silver paste BY01 series have good compatibility with mature front silver paste and backside aluminum paste on the market, but could not be mixed with other kinds of backside silver paste. Before mass production, the paste should be inspected the compatibility with silicon wafer, backside aluminum pate and front silver paste to avoid unexpected losses.

Safety Protection
LEED-INK silver paste BY01 series is non-toxic environment friendly paste up to European RoHS environmental regulation. When using this product, the operators should take necessary safety protection to avoid prolonged contact with skin, or inhalation of any vapors emitted during use or heating of these compositions, especially careful not to touch the eyes. If touched the eyes, quick rinse and ask a doctor for help.

Statement
The measuring parameters of silver paste BY01 series is limited to under a particular process environment, and it does not have legal effect. Because the differences of process parameters, production conditions and using environment, it is likely to result in different silver paste performance. Users shall conduct tests to determine materials suitability for a particular application. The company shall not be liable for any loss or damage caused.

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Hunan LEED Electronic Ink Co., Ltd.
Add: Bldg 2, No.8 Jinlong Road, Tianyuan District, Zhuzhou, Hunan, China   Post code: 412007
Tel: 86-731-22976365    Fax: 86-731-22976365
Website: www.leed-ink.com
E-mail: ec@leed-ink.com