

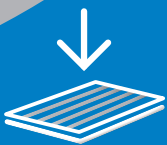
# SOL6700 Series



DUAL PRINTING BUSBAR PASTE

*efficiency*

Patent Pending



## New Generation Dual Printing Busbar Paste

- Design for Dual Printing with low laydown
- Less reactivity into the passivation  $\text{SiNx}$  and  $\text{AlOx/SiNx}$
- Compatible with Multi Busbar

Heraeus' newly developed SOL6700 dual printing busbar paste helps to realize higher efficiency and lower manufacturing costs of solar cells. SOL6700 contains a specific glass chemistry, imparting controlled reaction between Ag paste and the dielectric layer. At the same time, because of separate printing of busbar and finger paste, it does not need to consider the height of the busbar area, and allow to do more optimization on screen, to reduce the usage of the silver paste. The SOL6700 is designed to maximize the protection of the dielectric layer of cells from damage during metallization thus contributing to reduce electron recombination and improving the open-circuit voltage. Especially matching with mainstream finger paste on the market at present, can further improve the efficiency when combined with UFL screen printing technology. SOL6700 series, moreover, can be compatible with a variety of mainstream cell technology at present, including Mono PERC, Multi, N-type and so on.

### KEY BENEFITS

- Less reactivity into the passivation  $\text{SiNx}$  and  $\text{AlOx/SiNx}$
- Excellent adhesion and wide soldering window
- Compatible with all kinds of mainstream cell technology
- Compatible with Multi Busbar
- Better contact to boost efficiency gain in Multi Busbar

## HIGHER CELL EFFICIENCY AND LESS DEPOSIT

Especially for the SOL6700 Series, Heraeus has developed a new glass formulation and paste additives, which helps to minimize defects on the emitter during the metallization process. The low reactivity results in less fire-through/penetration into the passivation and offers in combination with the controlled Ag/glass interaction for higher adhesion and higher aged adhesion. With these properties, SOL6700 Series enables higher cell efficiencies, improved Voc as well as module reliability.

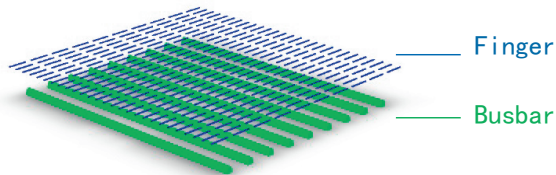


Fig1: SOL6700 specially design for DuP Busbar

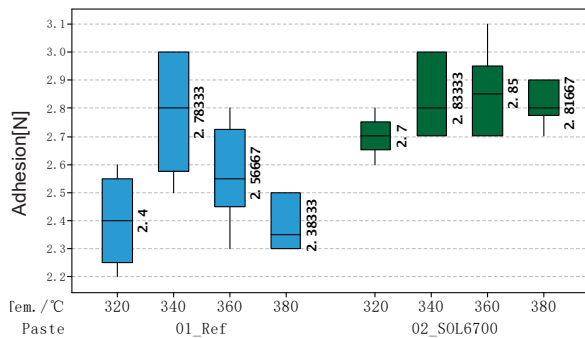


Fig2: SOL6700 shows higher adhesion

## BETTER PRINTABILITY AND NO EDGE BLUR

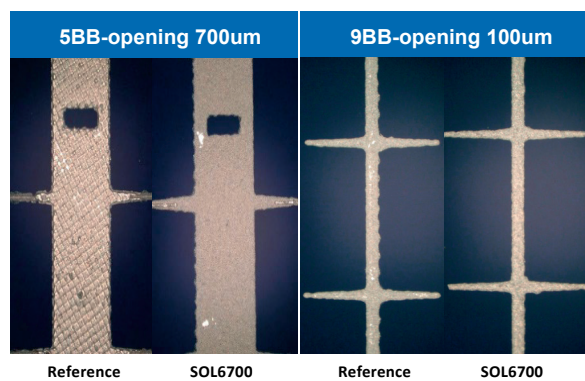


Fig3: SOL6700 shows better printability and no edge blur

## TYPICAL PROPERTIES

### Wafer types:

- P-type Mono incl. Normal Mono and Mono PERC
- Multi incl. DWC-Additive and MCCE
- N-type incl. PERT and TOPCon

**Solid content:** 88±1.5 %

### Fineness of Grind (FOG):

- 4th scratch: ≤ 12 μm
- 50 %: ≤ 8 μm

### Viscosity:

CPE-51 spindle, (Brookfield):  
70–150 kcps @ 1 RPM, 25°C

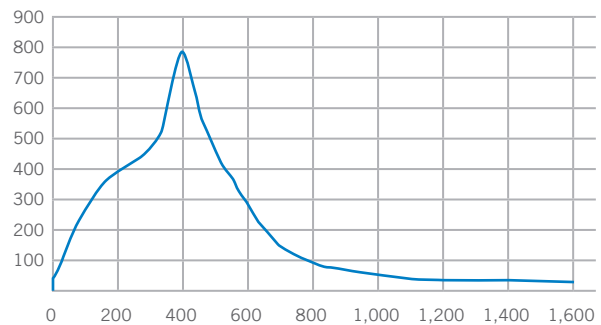
## RECOMMENDED PROCESSING GUIDELINES

**Printing:** 360/16, 380/14, 430/13

**EOM thickness:** ≤ 14 μm EOM

**Drying:** Typically dried in an IR dryer with set points of 250–300°C in less than 20 seconds.

**Firing:** IR Furnace with Actual Wafer Peak Temperature at 740–800°C profile.



### 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.

\*Contact your Application Engineering Team partner for individual advice.

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