In the past ten years or so, there has been a constant improvement of silver pastes for screen printing, for application as front side electrode in solar cell. In printing aspect, the screen opening has dramatically moved from 80 um to 28 um now. How to enable thinner finger with higher aspect ratio is the focus in current industry.

In this poster, a summary of the current situation is presented. Then how the rheology properties affect the printing performance in fine line printing is diagnosed and discussed. The recent development in our company shows good transfer properties of new paste through 25um opening screen, with good aspect ratio, with about 0.1% gain compared to base line. Rheology analysis of the new pastes shows unique features with traditional paste.