

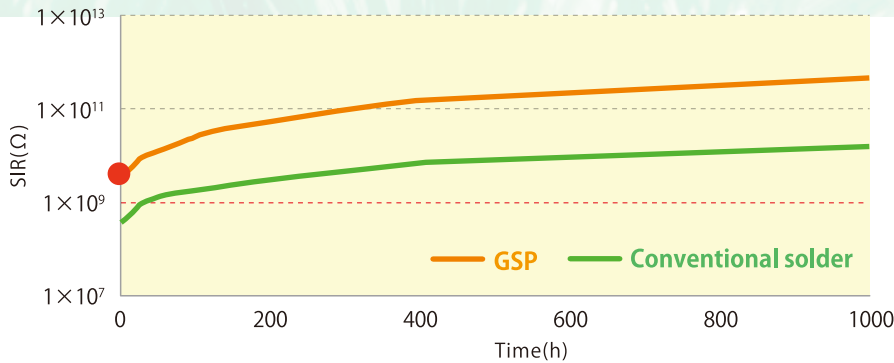
# Standard Lead-free Solder Paste for Automobile

High reliability and performance. Adopted by TOYOTA MOTOR CORPORATION.

## GSP

### High SIR.

#### Surface Insulation Resistance



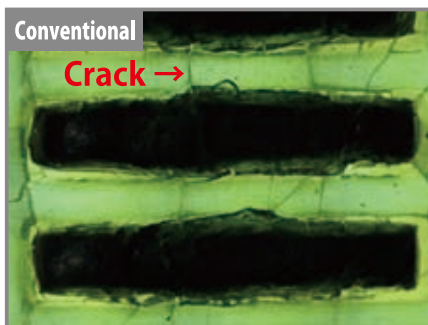
#### Test condition

- Test board : JIS II comb board
- Paste thickness : 150 μm
- Applied voltage : 20V
- Environment : 85°C / 85%RH

More than 10<sup>9</sup>Ω from initial

### Realize the suppression of residue cracking.

#### Flux residue after loading thermal cycle test.



#### Test condition

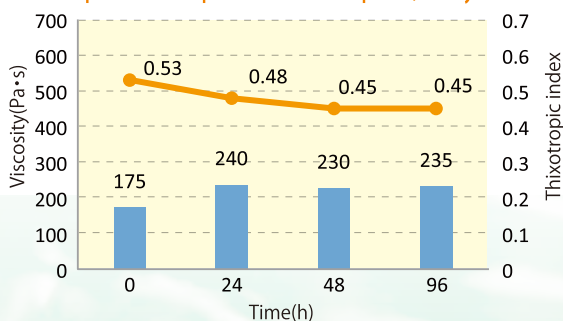
- Thermal condition : -40~125°C (30min. Each)
- Observed point : 0.5mmP QFP
- Print thickness : 180 μm
- Transmission observation with lighting from the back surface of the substrate.

No jointed crack even after 2,000 cycles

### Highly viscosity stability

#### Viscosity and Thixotropy change

〈80% of paste was replaced with new paste, every 12 hours〉



Highly viscosity stability ▶  
Possible to reduce solder paste waste