DOWSIL™ silicone super adhesion PSA to Liquid Silicone Rubber (LSR)

**Silicone PSA Adhesion to LSR**

**A historical challenge**

Low adhesion of PSA tapes to a LSR substrate

**Applicable markets**

- Electronics
- Gaskets
- Automotive
- Masking tapes

**Dow new solution**

- 3–10 times higher adhesion to LSR and high-consistency rubber (HCR) (20 minutes dwell)
- PSA is coated on PET or polyimide, peroxide cure with a 2 wt% peroxide level. Tested on 20–70 durometers and peroxide/Pt cure types

“Permanent” bonding is possible

“Permanent” bonding means LSR cohesively fails before delamination of adhesive bonding

**Peel strength on LSRs and HCRs**

- 3–10 times adhesion!
**Tunable performance**

- Adhesion to LSRs and HCRs is tunable based on different silicone PSA compositions (keeping a 2 wt% peroxide level):
  - Very strong (~2000 g/inch)
  - Strong (~1200 g/inch)
  - Medium (~800 g/inch)

**Other benefits to Fluoro-Si rubbers and Si foams**

- A new version of silicone PSA composition exhibits higher adhesion on:
  - Silicone foam (Si foam)
  - Fluorosilicone rubber (Fluoro-Si rubber)
- 3–5 times adhesion than existing commercial products