



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

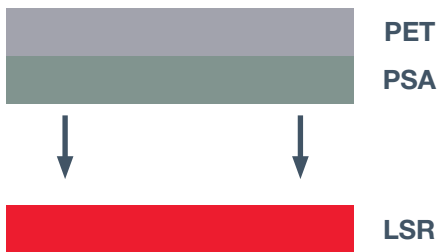
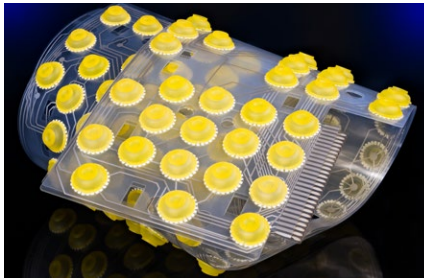
Silicone PSA Adhesion to LSR

A historical challenge

Low adhesion of PSA tapes to a LSR substrate

Applicable markets

- Electronics
- Gaskets
- Automotive
- Masking tapes



Dow new solution

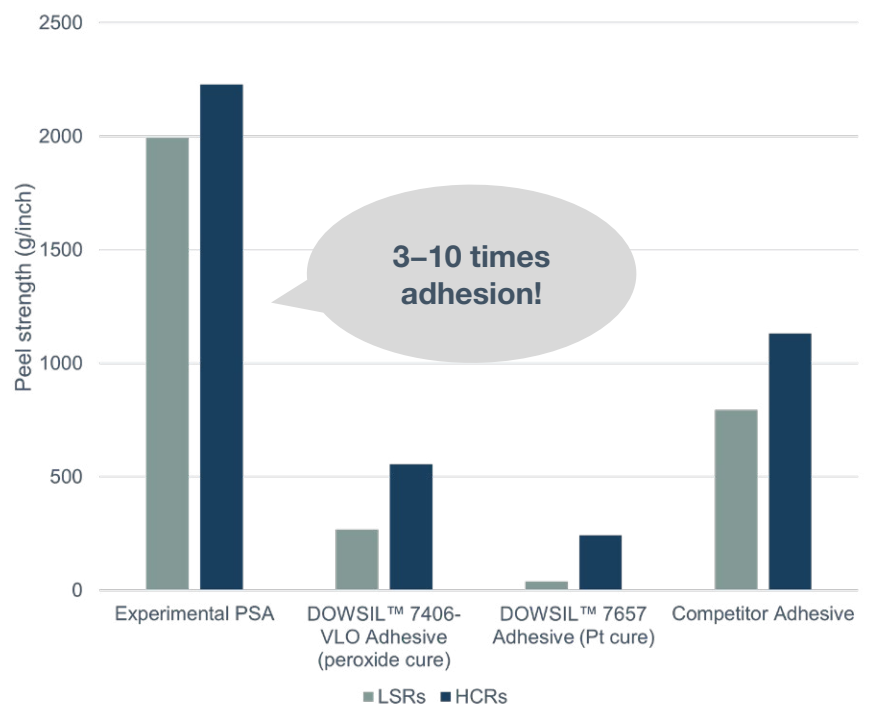
- 3–10 times higher adhesion to LSR and high-consistency rubber (HCR) (20 minutes dwell)
- PSA is coated on PET or polyimide, peroxide cure with a 2 wt% peroxide level. Tested on 20–70 durometers and peroxide/Pt cure types

“Permanent” bonding is possible



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

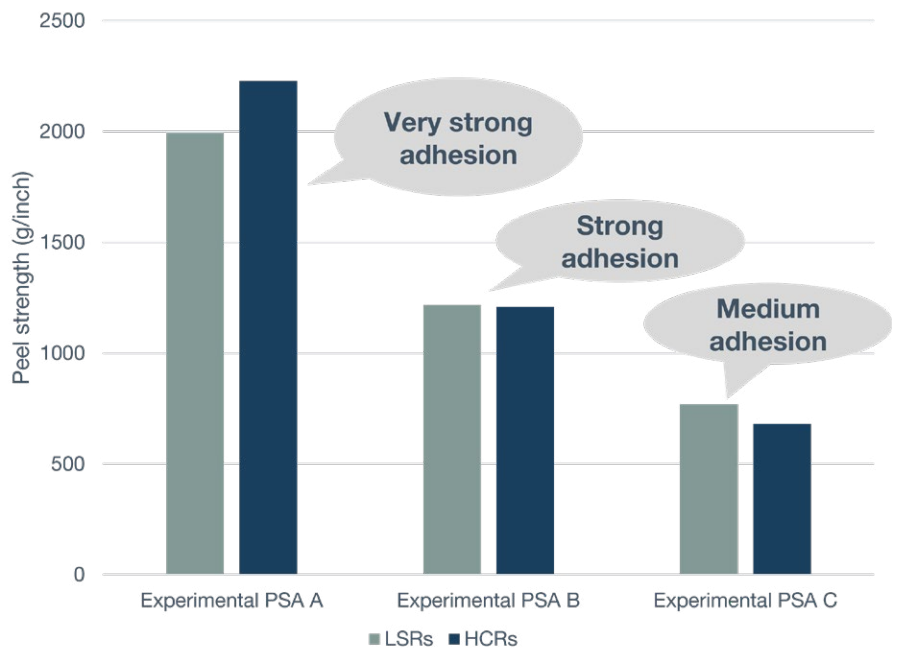
Peel strength on LSRs and HCRs



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)

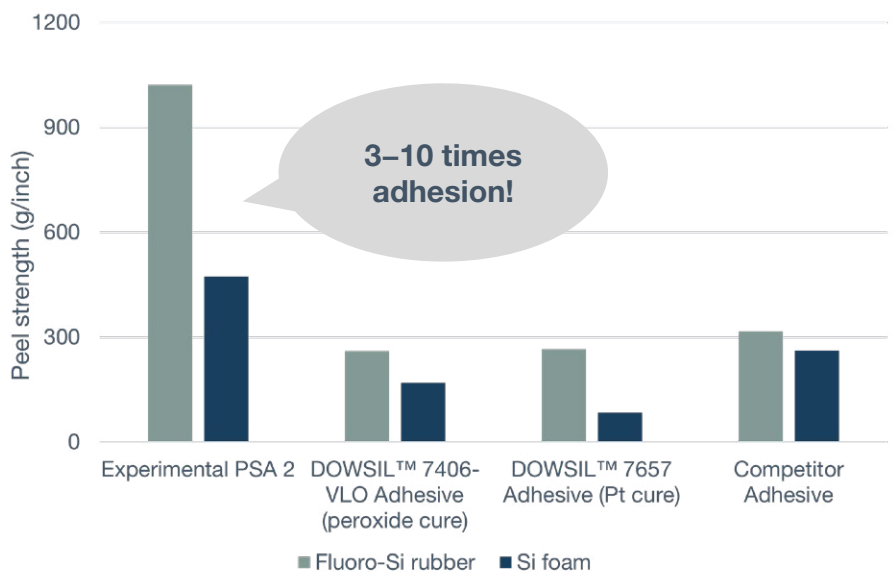
Peel strength on LSRs and HCRs



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

Peel strength on Fluoro-Si rubber and Si foam



Images: dow_60393916615, dow_55401555867, dow_40646065828, dow_66823277904

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Form No. 11-4327-01-0423 S2D