

SilGrip™ CR593 Pressure Sensitive Adhesive

Product Description

CR593 silicone pressure sensitive adhesive is a xylene solution of polysiloxane gum and resin. It is supplied at 55 percent silicone solids and may be further diluted with aromatic, aliphatic or chlorinated solvents. CR593 may be blended with SR545 resin dispersion or with other methyl-based silicone pressure sensitive adhesives to obtain specific performance properties. CR593 adhesive has been found useful in coating of film and fabric substrates for manufacturing industrial pressure sensitive tapes. It may be an excellent choice suitable for masking tapes used in electronic assembly applications and for electrical insulation tapes.

Key Features and Typical Benefits

- Wide temperature range performance, maintains good shear and tack properties at intermittent temperatures up to 550° F / 288° C
- Adhesion to a wide variety of surfaces including low energy surfaces like silicone elastomer.
- Resistance to moisture, weathering (ozone, sunlight), chemical (acids, alkalis, oils, flux, reverse current stripping) and biological attack
- Minimum silicone residue on applied surfaces (e.g., printed circuit boards)
- Excellent lap shear and creep resistance

Typical Physical Properties

Property	Value
Silicone Solids, %	55
Specific Gravity	0.95
Density, lbs/gal (g/cm ³)	8.05/0.95
Viscosity @ 25° C (77° F), cps (Brookfield RVF)	57,000
Color	Light Straw
Flash Point (ASTM D93) , C (° F)	27.2 (81)
Solvent	Xylene

Typical properties are average data and are not to be used as or to develop specifications.

Typical Cured Adhesive Properties

Peel Adhesion ⁽¹⁾ , oz/inch (N/cm)	39/4.27
Tack ⁽²⁾ , g/cm ²	730

Typical properties are average data and are not to be used as or to develop specifications.

⁽¹⁾ 2 mil dry adhesive thickness, 1mil polyester film, 1.5% benzoyl peroxide⁽³⁾, curing cycle: 10 minutes air dry, 90 seconds at 177°C, stainless steel, 12 inches/minute, 180° angle

⁽²⁾ Polyken Tack Tester, 100g weight, 0.5 sec dwell time, 0.5 cm/sec draw speed, 2 mil dry adhesive thickness, 1mil polyester film, 1.5% benzoyl peroxide⁽³⁾, curing cycle: 10 minutes air dry, 90 seconds at 177°C

⁽³⁾ Luperox A98 from Arkema

The properties of a cured silicone adhesive are affected by several factors such as type and amount of catalyst, cure cycle, adhesive thickness and backing type and thickness. Higher catalyst concentration will increase cohesive strength of the adhesive and improve shear strength, but it will reduce its adhesive strength resulting in lower tack and peel values.

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

Product Safety, Handling and Storage

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at www.momentive.com or, upon request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

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