

Polymer Systems Technology Limited

UK & Ireland Distributor



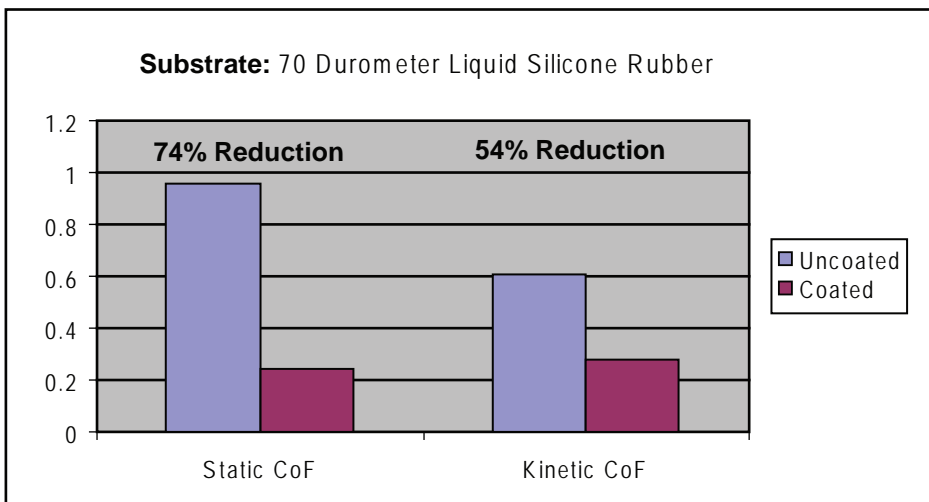
© 2010 - Polymer Systems Technology Limited TM
Unit 2. Network 4. Cressex Business Park,
Lincoln Road, High Wycombe, Bucks. HP12 3RF
Phone +44 (0) 1494 446610
Fax: +44 (0) 1494 528611
Web: <http://www.siliconepolymers.co.uk>
Email: sales@silicone-polymers.co.uk



Low Coefficient of Friction Silicone Coating

Silicone elastomers inherently have a high degree of surface tack and a tendency for blocking (sticking to themselves by virtue of chemical affinity). These inherent features may be problematic for applications requiring a molded or extruded silicone part to move or slide with minimal friction. This can be especially problematic in cases where the silicone is likely to fold and unfold or spool together during storage.

R-2182 is a two-part, low coefficient of friction silicone coating dispersed in xylene, specifically designed to coat molded or extruded silicone parts and overcome the above mentioned obstacles. A thin coat of R-2182 will cure rapidly with elevated temperatures. Once cured, the coating will have chemically bonded to the silicone elastomer substrate and mimic the mechanical properties thereof, resisting abrasion and eliminating the concern of migration commonly associated with lubricants such as fluids and greases. The result is a durable yet flexible coating that resists abrasion from moving, sliding and rubbing parts. It achieves this with a smooth finish that also results in at least a 50% decrease in coefficient of friction when coated silicone samples vs. non-coated silicone samples are compared side-by-side.



About NuSil Technology

NuSil Technology, an ISO-9001 certified company since 1994, is an industry leader in developing, manufacturing and testing silicone compounds for applications requiring precise and predictable materials performance in the engineering industry. NuSil operates state-of-the-art laboratories and processing facilities in North America and provides on-site, in-person application engineering support worldwide.

NuSil Technology LLC

1050 Cindy Lane
Carpinteria, CA 93013
+1 (805) 684-8780
+1 (805) 566-9905 Fax
silicone@nusil.com

NuSil Technology - Europe

Parc d'Activités de Sophia Antipolis
Le Natura Bt2
1198, avenue Maurice Donat
06250 MOUGINS France
+33 4 92 96 93 31
+33 4 92 96 06 37 Fax
nusil.sophia@nusil.com

For more information, please visit:
www.nusil.com



Low Coefficient of Friction Silicone Coating

Approximately the consistency of water, R-2182 can be applied by dipping, but spraying is recommended. The substrate being coated should be free of contamination, not inhibit the cure, and be able to withstand the cure cycle. If utilizing a spraying technique, it is recommended to spray 2-3 inches from the target surface, with the coated substrate evenly wetted but not soaking. Ideal coating thickness for optimal reduction can be achieved with a single spray coat. Devolatilize with air flow or under a fume hood for approximately 5 minutes, then cure at 150°C (302°F).

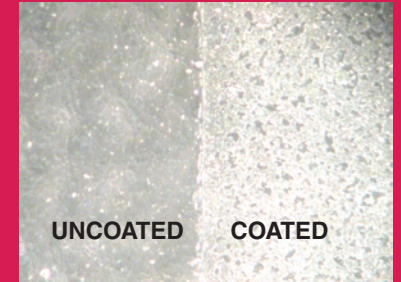
Properties	Average Result
Uncured:	
Appearance, Part A*	Translucent
Appearance, Part B*	Opaque
Zahn Cup Viscosity, Cup #2*	15 seconds
Percent Solids, Mixed*	20%
Specific Gravity	0.96
Work Time	>24 hours
Refractive Index	1.41
Cured: 5 minutes minimum @ ambient temp. and humidity, then then 5 minutes @ 150°C (302°F)	
Contact Angle	123°
Surface Energy	10.21 mJ/m ²
* Properties tested on a lot-to-lot basis. Do not use the properties shown in this technical profile as a basis for preparing specifications. Please contact NuSil Technology for assistance and recommendations in establishing particular specifications.	

See Product Profiles for more detailed information regarding test methods

Potential uses for R-2182:

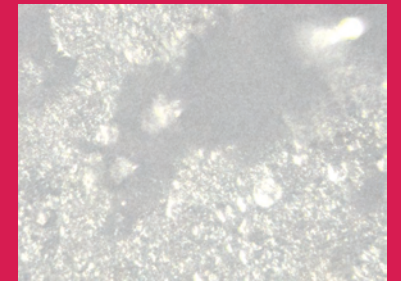
- Tubing (ID/OD)
- Valves
- Stoppers
- Cables
- Control the flow of hydrophilic fluids
- O-Rings / gaskets
- Precision molded parts
- Anywhere that you have moving or sliding parts

For additional information on cure inhibition, please reference NuSil Technology's Avoiding Inhibition When Working with Platinum Catalyzed Silicones.

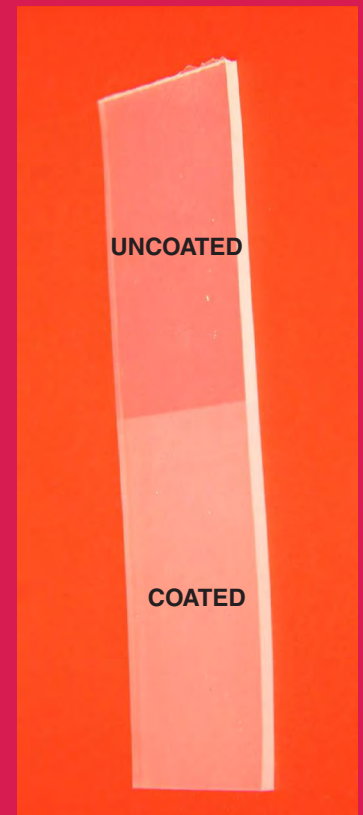


UNCOATED COATED

10 X Magnification



200 X Magnification



UNCOATED

COATED

For more information, please visit:
www.nusil.com