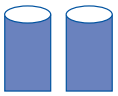
Gelest® hPDMS 2-Part High Modulus Reprographic Silicone Elastomer (1:1 kit)

Capsular Description:	Thickness	Cure	Hardness	Type
	 thick	Pt catalyst	 medium-high	 100% active 2-part

Description

Gelest® hPDMS is a clear molding and encapsulation compound with a higher modulus than conventional silicones. This 'hard' PDMS addresses the issues of compliant PDMS in soft lithography applications.

Cured Properties

Tensile Strength	0.5-0.75 MPa
Elongation	30-40%
Durometer, Shore A	**60-70**
Refractive Index (25°C)	1.41
Specific Gravity	0.98

Uncured Properties of Gelest® hPDMS

Viscosity (1:1) catalyzed: 500-750 cSt
Part A (base): 800-1200 cSt
Part B (crosslinker): 150-300 cSt

Application Methods

Thoroughly mix Part A and Part B in a 1:1 ratio. Try to avoid introducing bubbles. For critical applications, de-air mix under vacuum for about 20 minutes. The pot-life is 4 hours at 25°C. Avoid entrapping air during transfer and casting. Cure at 80°C for 4 hours or at room temperature for 24 hours. Care is required in demolding this material. Mechanical penetration of the cured elastomer may compromise integrity of material; device access ports should be included in the master mold design.

Standard Packaging

PP2-RG07 Gelest® hPDMS
100 g SpeedMixer™ kit
1 kg kit (500g RG07-A, 500g RG07-B)

Application and Reference Data

1. Schmid, H. et al. *Macromolecules* **2000**, *33,* 3042.
2. Odom, T. et al. *Langmuir* **2002**, *18*, 5314.