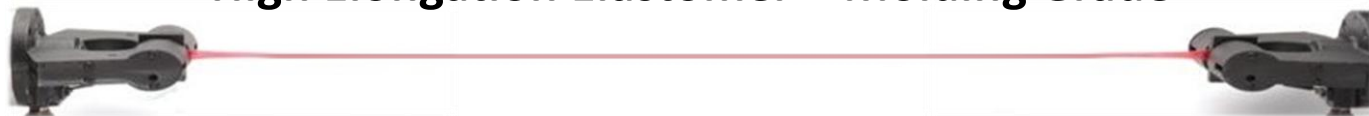


Gelest® ExSil™ 100

High Elongation Elastomer – Molding Grade



Description:

Gelest® ExSil™ 100 is a two-component high elongation silicone elastomer developed for molding applications.

Typical Properties

Note: The values below are typical, not intended for use in preparing specifications. Please contact a Gelest representative when writing specifications.

Cured Properties	Value	Units
Elongation	5000	%
Tensile Strength	8 - 9	MPa
Tear Strength	42	kN/m
Elongation @ Tear Failure	2000	%
Durometer	15	Shore A
Specific Gravity	1.12	g/mL
Refractive Index (n_D^{25})	1.41	
Volatiles (4 hours/150°C)	≤0.1	wt%
Critical Surface Tension	23 to 24	mN/m
Contact Angle, water	105 to 100	°

Features:

- Self healing
- High Recovery
- High Elongation
- Low Extractables
- High Tear Strength
- High compression set
- Flowable & moldable
- High oxygen permeability
- Long term thermal stability

Applications:

- Molding
- Diaphragms
- Microfluidics
- Vibration Damping
- High performance seals
- Optical & Electrical Interconnects



Part	Viscosity (cSt)
Base (Part A)	12,000-14,000
Activator (Part B)	800-1,000
Activated mix	12,000-14,000

	Extractables (wt%)
Conventional Silicone – Pt Cure	4.2
Conventional Silicone – (100°C Strip)	3.1
Gelest® ExSil™ 100	0.2

Fig. 1: Stress-Strain
ExSil™ 100 (red) vs. conventional resin reinforced silicone (blue)

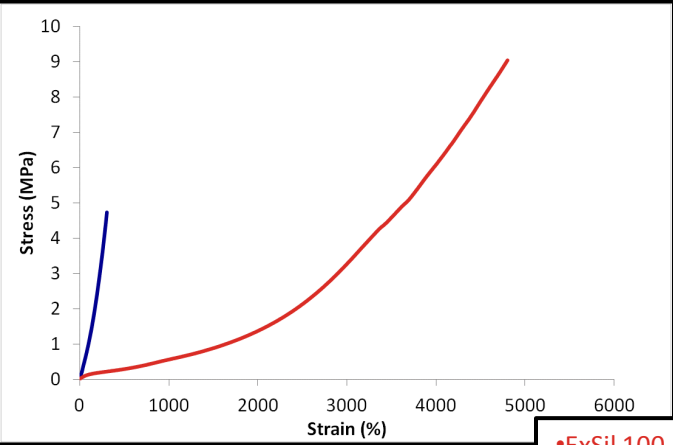


Fig. 2: TGA Analysis
ExSil™ 100 (red) vs. conventional resin reinforced silicone (blue)

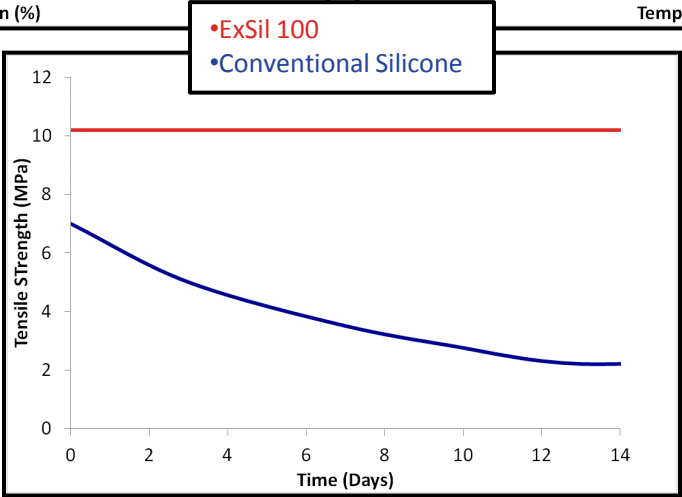
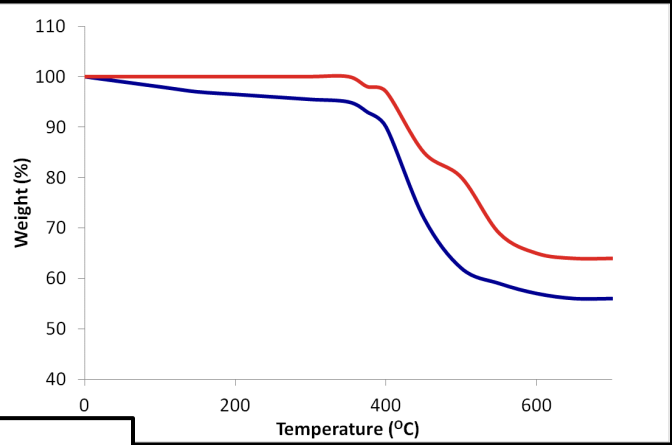


Fig. 3: Heat Aging
ExSil™ 100 (red) vs. conventional resin reinforced silicone (blue)

Processing & Fabrication:

Thoroughly mix Part A and Part B in a 100:1 ratio. Try to avoid introducing bubbles. For critical applications, de-air mix under vacuum for about 20 minutes. The pot-life is 24 hours at 25°C. Avoid entrapping air during transfer and casting. Cure at 80°C for 4 hours or at room temperature for 36 hours. ExSil™ 100 can be self-bonded by exposure to oxygen plasma and pressing surfaces together in a dry atmosphere.