

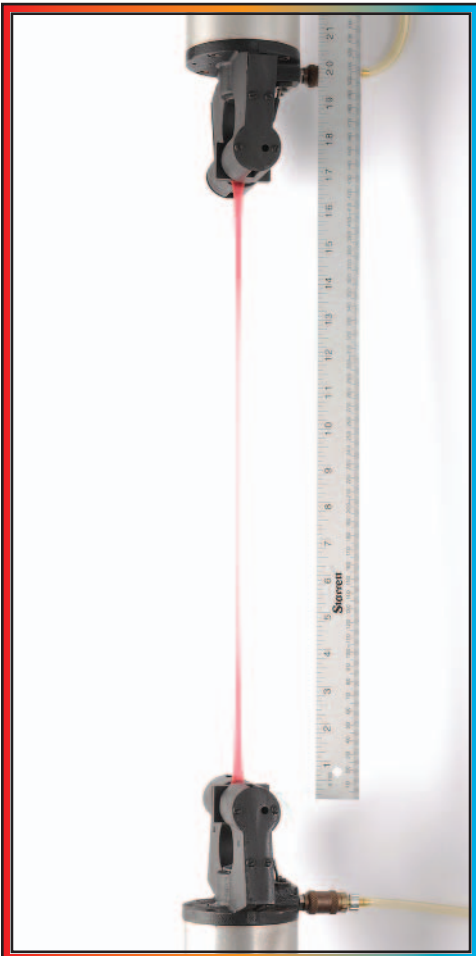
**Gelest® PP2-TC02** is a two-component ultra high elongation thermally conductive silicone gap filler. The extreme elongation of this product reduces mechanical as well as thermal stress, creating new fabrication and assembly options.

#### Features & Benefits

- Flowable & heat curable
- Soft & compressible
- High elongation at break
- Thermally conductive
- Platinum addition cure

#### Applications

- Thermal transfer for electronic modules
- Cure in place thermal pad
- Vibration damping
- Flexible electronics



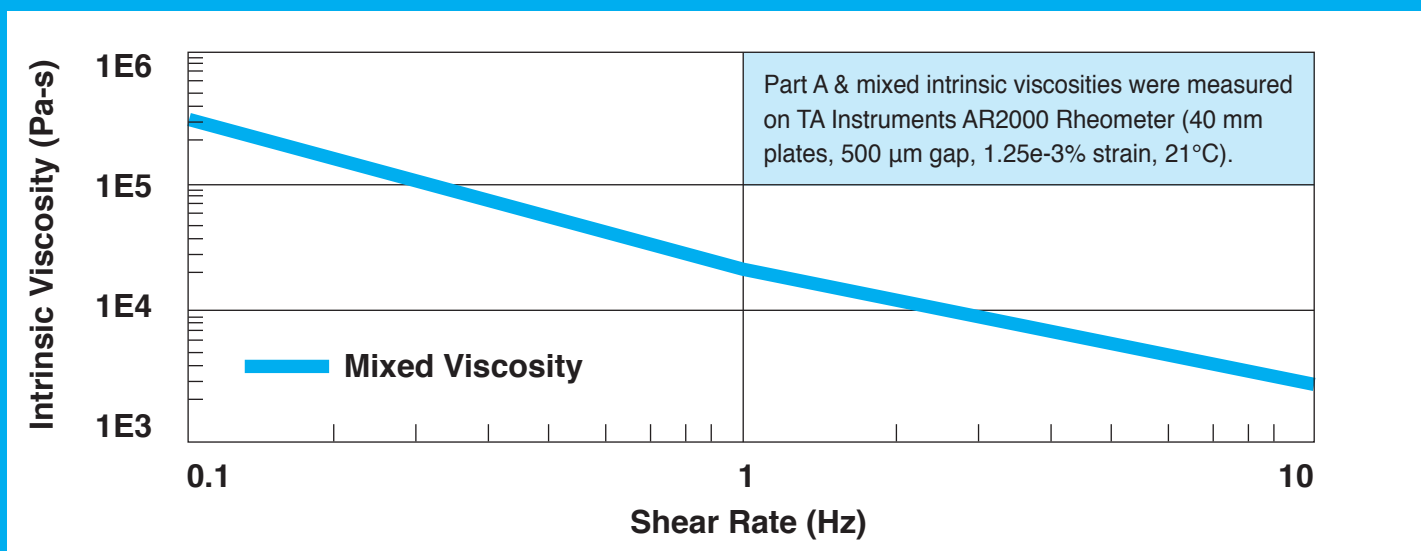
#### Typical Properties

The properties reported below are typical and intended as a guide for design engineers and are not intended for use in preparing specifications.

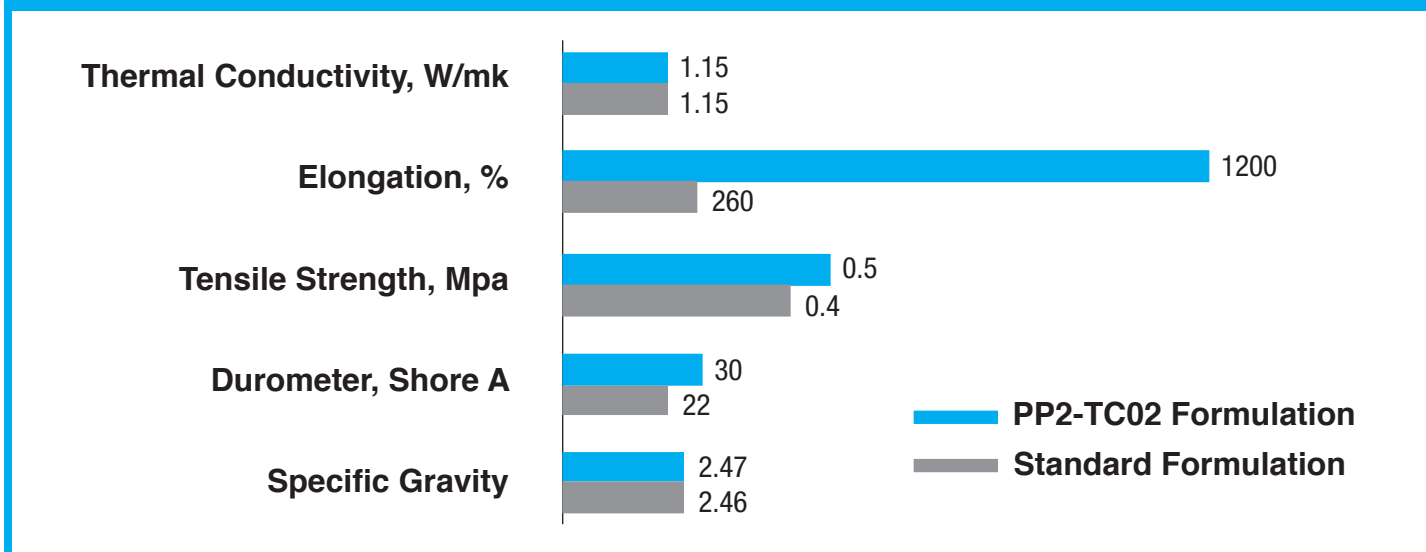
Properties	Units	Value
Mix Ratio (wt)		100:1
Color Part A		White/Gray
Color Part B		Clear
Viscosity Mixed*	cP	30,000
<b>Thermal Conductivity</b>	<b>W/mK</b>	<b>1.15</b>
<b>Elongation</b>	<b>%</b>	<b>1200</b>
Tensile Strength	MPa	0.5
Durometer	Shore A	30
Specific Gravity		2.47

\*Part A and Mixed intrinsic Viscosities were measured on TA Instruments AR2000 Rheometer (40 mm plates, 500 µm gap, 1.25e-3% strain, 21°C). Part B viscosity was measured on a Brookfield DTI+ viscometer (S18 spindle, 20 rpm, 24°C).

## Comparison of Viscosity vs Shear Rate for Mixed Parts A & B (100:1)



## Comparison of Thermally Conductive Silicone Gap Fillers



## Processing, Fabrication, and Properties

Thoroughly mix PP2-TC02 Part A prior to weighing out the material. Mix Part A with PP2-TC02 Part B in a 100:1 mix ratio by weight. A low mixing speed (800-1000 rpm) is recommended for a centrifugal mixer. Avoid entrapment of air when mixing, pouring, dispensing, or printing the material.

Recommended cure conditions are **100°C for 1 hour**. Lower temperatures require longer cure times (**~4 hrs at 80°C**) compared to higher temperatures (**~30 minutes at 110°C**). Potlife based on snap time is typically **10 hrs at 25°C**. Viscosity vs. shear rate is supplied for use in automated dispensing and printing applications. Elongation of this material is extremely high compared to standard thermally conductive products. A comparison of the PP2-TC02 properties to a standard formulation is provided.