



# Technical Data Sheet

## QGel 900

### High Refractive Index Silicone Gel

#### PRODUCT DESCRIPTION

QGel 900 is a clear, very soft, tough, moderately cross-linked, silicone polymeric elastomer, offering exceptional clarity for optical transmission applications. This gel also provides self-healing protection to sensitive devices isolating them from shock, vibration and CTE stress. This particular silicone gel also provides excellent moisture protection and equally outstanding electrical properties over a broad temperature range.

#### KEY FEATURES

- One to one mix ratio
- Soft, but resilient gel
- Dispensing equipment not necessary
- Good adhesion with QSil Primer #5

#### TYPICAL PROPERTIES

UNCATALYZED		
TEST	QGel 900 A	QGel 900 B
Appearance	Transparent	Transparent
Viscosity	1,455 cps	1,645 cps
Specific Gravity	1.00	1.00

CATALYZED	
MIX RATIO 1:1	
TEST	RESULT
Gel Time at 25°C	45 minutes

\* Gel time is defined as the time required for the material to become a solid or a semi-solid.

CURED PROPERTIES	
Cure Profile	30 minutes at 150°C
	60 minutes at 100°C
	24 hours at 25°C
Penetration, 60 minutes at 150°C	5 - 9 mm

ADDITIONAL PROPERTIES	
Service Temperature Range	-113°C - 235°C
Adhesion	Silicone gels have a tacky surface and will form a mechanical bond to most substrates. Will form a covalent bond when Primer #5 is used.
Electrical Properties	Excellent dielectric strength

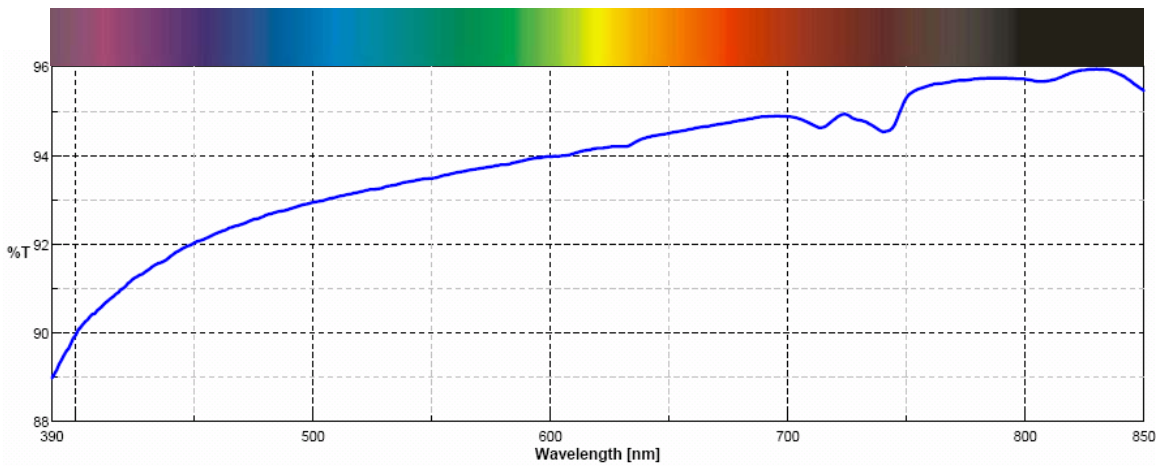


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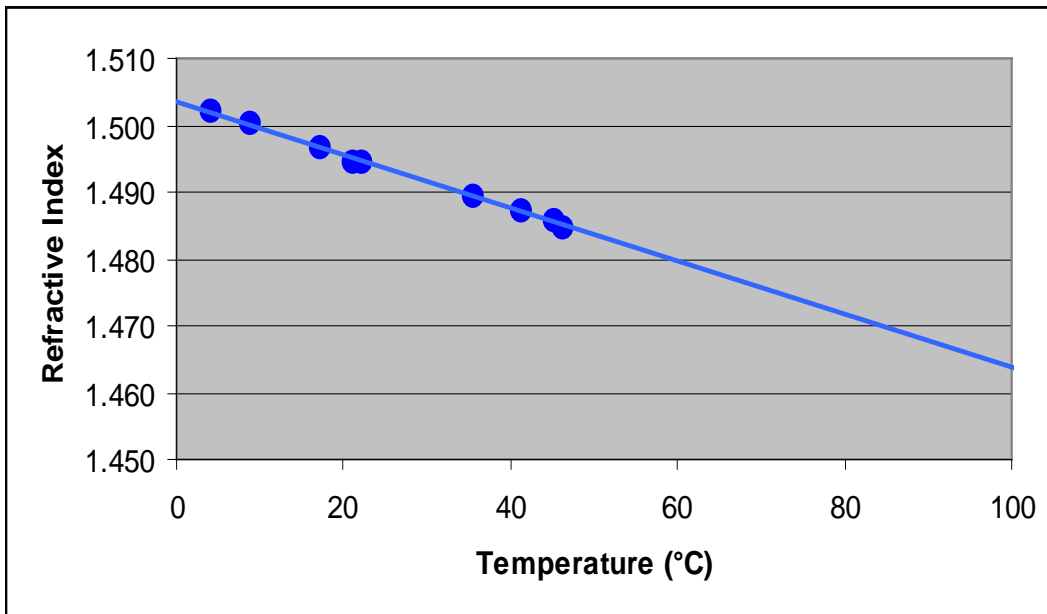
## OPTICAL PROPERTIES

Refractive Index, 589 nm	1.43
Refractive Index vs. Temperature, 589 nm	$3.8 \times 10^{-4} \text{ }^\circ\text{C}$
Transmittance, 400 nm	89.95 %

### Transmittance, 1cm path length



### Refractive Index vs. Temperature





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### MIXING

QGel 900 should be thoroughly mixed using a 1:1 ratio by weight or by volume. Once the components are mixed the curing process begins. The gel time of the mixed material is listed above under typical properties. Fast curing gels (less than 30 minute gel time) should be dispensed utilizing automated mix and dispense equipment.

### DE-AERATION

Air trapped during mixing should be removed to eliminate voids in the cured product. Vacuum de-airing may be necessary to completely remove all entrapped air bubbles. To ensure proper de-airing, subject the mixed material to 29 inches of mercury.

### STORAGE AND SHELF LIFE

If QGel 900 A and QGel 900 B are stored in their original unopened containers, in an environment that does not exceed 38°C (100°F) then QSi will warranty the material for a period of 12 months from the date of shipment.

### DISCLAIMER

The technical data listed is provided for reference only and is not intended as product specifications. QSi has the capability to customize products as requested. For sales and technical assistance please contact customer service at (804) 271-9010 or 1-800-852-3147.

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