

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	581 cps	477 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.

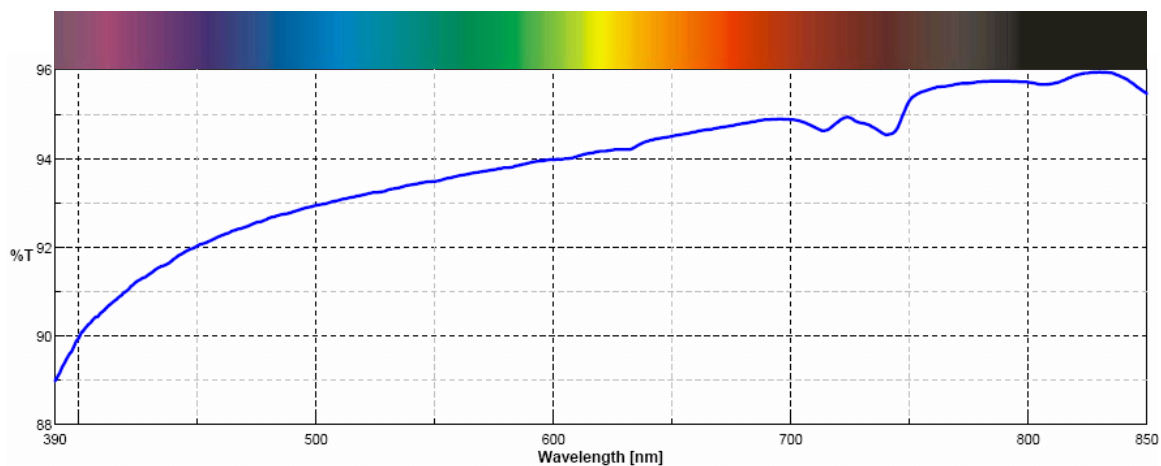
CURED PROPERTIES	
Cure Profile	30 minutes at 150 °C
	60 minutes at 100 °C
	24 hours at 25 °C
Penetration, 60 minutes at 150 °C	5 – 9 mm

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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

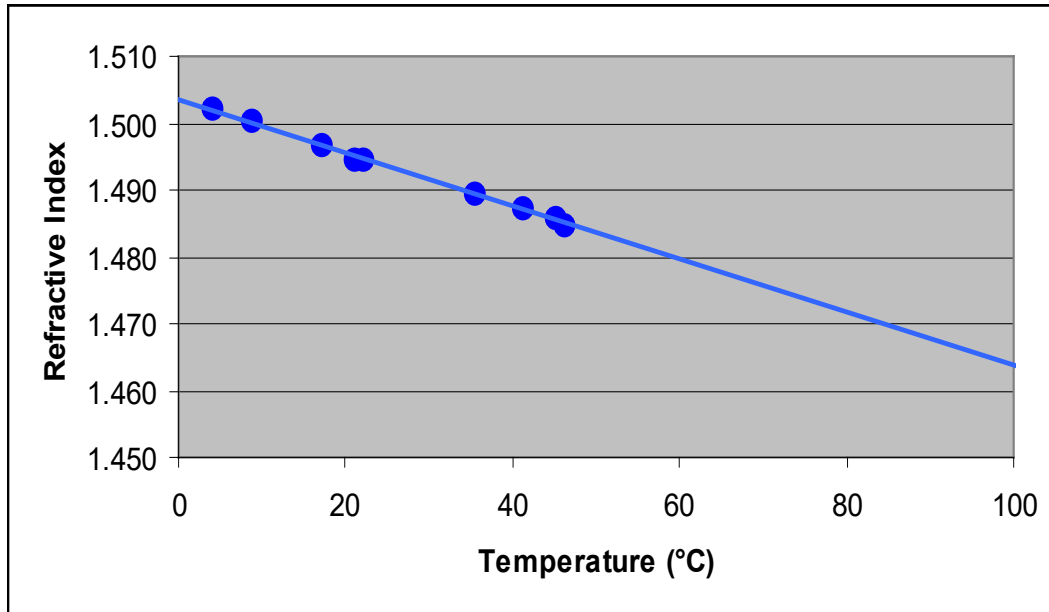
OPTICAL PROPERTIES	
Refractive Index, 589 nm	1.43
Refractive Index vs. Temperature, 589 nm	$3.8 \times 10^{-4} \text{ } ^\circ\text{C}$
Transmittance, 400 nm	89.95 %

Transmittance, 1 cm path length



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Refractive Index vs. Temperature



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

This product is best when used within 24 months from date of manufacture. See product label and/or CoA for specific "Use By Date".

Product should be stored in its original, unopened container in an environment that does not exceed 38 °C (100 °F).

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case, the properties required for the intended use should be checked for quality assurance reasons.

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DISCLAIMER

The technical data listed is provided for reference only and is not intended as product specifications. CHT USA's team accepts opportunities to either modify specifications in a current product or custom formulate a new one to meet your requirements. For sales and technical assistance, please contact us at: **(804) 271-9010** or **1-800-852-3147**.

Please be sure to visit our website daily for our complete product portfolio, new product introductions and more:

www.silicone-experts.cht.com

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