

Technical Data Sheet

QSil 216 Transparent, Liquid Silicone Rubber

PRODUCT DESCRIPTION

QSil 216 is a two-part, transparent and colorless, liquid silicone which will cure at room or elevated temperature. It has a low viscosity, which allows for ease of flow around complex parts, providing electrical insulation and shock resistance.

KEY FEATURES

- Convenient 10:1 mixing ratio for use in automatic dispensing equipment or hand mixing
- Contains no solvents
- Non-yellowing catalyst system
- Chemical composition provides hydrolytic stability and reversion resistance



TYPICAL PROPERTIES

UNCATALYZED		
TEST	QSil 216 A	QSil 216 B
Color	Clear	Clear
Viscosity	4,000 cps	700 cps
Specific Gravity	1.02	1.01

CATALYZED	
MIX RATIO 10:1 by weight	
Color	Transparent, colorless
Consistency	Easily pourable
Gel Time at 25 °C *	6 hours

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

CURED PROPERTIES	
30 minutes at 150 °C	
PROPERTY	RESULT
Durometer	40, Shore A
Tensile	750 psi
Elongation	100%
Linear Shrinkage	< 0.1%
Refractive Index	1.406
CTE (0 °C – 100 °C)	317 ppm/°C

Technical Data Sheet

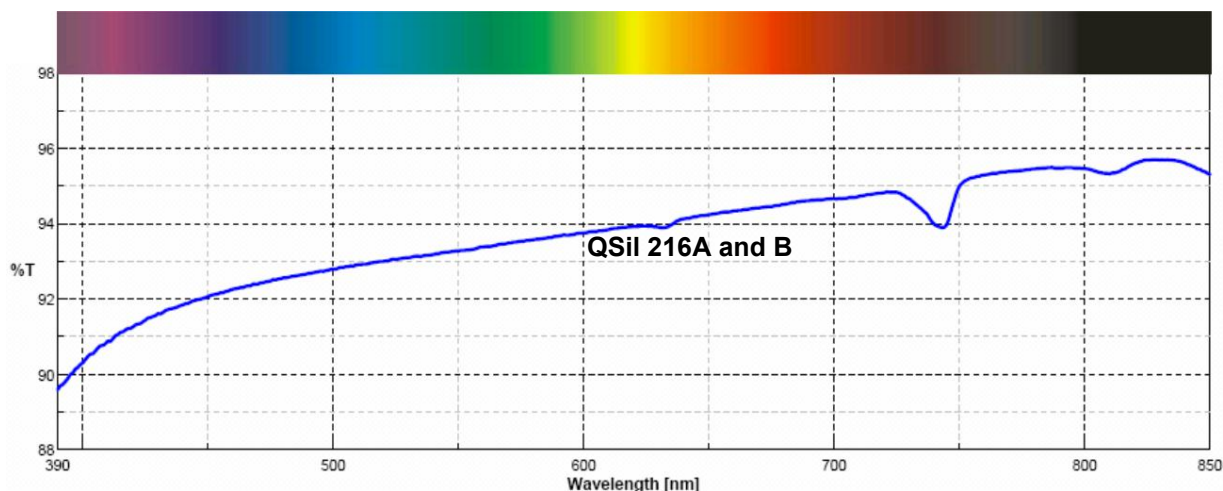
ELECTRICAL PROPERTIES (Typical Properties)	
Dielectric Strength	500 V/mil
Dielectric Constant at 1,000 Hz	2.69
Dissipation Factor at 1,000 Hz	0.0006
Volume Resistivity	1.7×10^{15} ohm-cm

THERMAL PROPERTIES (Typical Properties)	
Useful Temperature Range	-55 °C – 204 °C
Thermal Conductivity	0.18 W/m-K
Coefficient of Thermal Expansion, cm/cm, °C	27.5×10^{-5}
Specific Heat	0.3 cal/g-°C

OPTICAL PROPERTIES (Typical Properties)	
Refractive Index, 589 NM	1.405
Transmittance, 400 nm	90.3%



Transmittance @ 1 cm path length



Technical Data Sheet

MIXING

QSil 216 A is reacted with QSil 216 B at a 10:1 ratio by weight. In order to achieve optimum performance, the same lot number of QSil 216 A and QSil 216 B should be used.

Combine ten parts of QSil 216 A with one part of QSil 216 B by weight into a clean, compatible container. The volume of the container should be 3 - 4 times the volume of the material to be mixed. Mix by hand or with mixing equipment until a homogeneous mixture is obtained. Accurate weighing of all components, on a suitable scale, is essential for optimal product performance when mixing by hand.

DE-AERATION

Air trapped during mixing should be removed by vacuum at 29 inches of mercury. During the process, the material will expand, and intermittent evacuation may be required. Typically, after releasing the vacuum 2 – 3 times, the mass will collapse on itself at which time the vacuum should be left on for an additional 2 – 4 minutes.

Machine mixed material does not normally need to be de-aired.

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.

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

www.quantumsilicones.com

CHT USA - Richmond, 7820 Whitepine Road, Richmond, VA 23237

Manufacturing and R&D Facility, 8021 Reycan Road, Richmond, VA 23237

