

Technical Data Sheet

QSil 553 Addition Cure Potting Material

PRODUCT DESCRIPTION

QSil 553 is a 100% silicone solids elastomer designed for electronic potting applications. The two-component system offers a flame retardant, thermally conductive, low modulus material that is readily repairable.

KEY FEATURES

- 100% solids - no solvents
- Long pot life
- Low modulus
- Good elongation
- UL listed

TYPICAL PROPERTIES

UNCATALYZED		
PROPERTY	QSil 553 A	QSil 553 B
Appearance	Beige	Black
Viscosity	6,000 cps	6,000 cps
Specific Gravity	1.63	1.63

CATALYZED PROPERTIES	
MIX RATIO 1:1	
PROPERTY	RESULT
Work Life at 25 °C *	100 minutes

* Work life is defined as the time required for the material to reach a viscosity of 25,000 cps.

CURED PROPERTIES	
15 minutes at 150 °C	
PROPERTY	RESULT
Durometer	45, Shore A
Tensile	250 psi
Elongation	240%
Tear	45 pli
100% Modulus	180 psi

Technical Data Sheet

ELECTRICAL PROPERTIES	
PROPERTY	RESULT
Dissipation factor	0.009
Dielectric constant @ 1000Hz	3.08
Volume resistivity	4.02 X 10 ¹⁴ ohm-cm
Comparative Tracking Index (CTI)	600 volts
Performance Level Category (PLC)	0

UL LISTED (FILE NUMBER E205830)	
UL 94 V-0	3.0 mm

THERMAL PROPERTIES **	
PROPERTY	RESULT
Thermal Conductivity**	~ 0.68 W/m-K
Useful Temperature Range	- 55 °C – 240 °C

** Hot wire method.

MIXING

In order to achieve optimum performance, the same lot number of QSil 553 A and QSil 553 B should be used.

QSil 553 A and QSil 553 B should be thoroughly mixed prior to catalyzation.

Mixing by hand:

Catalyze QSil 553 A with QSil 553 B at a 1:1 ratio by weight using a clean plastic or metal container of approximately 3 times the volume of the material and mix by hand. Accurate weighing of all components, on a suitable scale, is essential for optimal product performance when mixing by hand.

Mixing and dispensing with automatic equipment:

Use a mixing system that will properly mix the QSil 553 A and QSil 553 B at a 1:1 ratio by weight.

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.

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".

Technical Data Sheet

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