

Technical Data Sheet

QSiil 545 Addition Cure Potting Material

PRODUCT DESCRIPTION

QSiil 545 is a 100% silicone solids elastomer designed for electrical potting applications. The two-component system offers a hard, thermally conductive, low modulus material that is readily repairable.

KEY FEATURES

- 100% solids
- Fast gel time
- Good elongation
- Low modulus

TYPICAL PROPERTIES

UNCATALYZED		
PROPERTY	QSiil 545 A	QSiil 545 B
Appearance	Beige	Black
Viscosity	3,190 cps	4,040 cps
Specific Gravity	1.40	1.40

CATALYZED	
MIX RATIO 1:1	
Gel Time at 25°C *	4 minutes 30 seconds

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

CURED PROPERTIES	
7 minutes at 150 °C	
PROPERTY	RESULT
Durometer	62, Shore A
Tensile	657 psi
Elongation	101%
Tear	20 ppi
Useful Temperature Range	- 55 °C – 204 °C

Technical Data Sheet

ELECTRICAL PROPERTIES	
PROPERTY	RESULT
Dissipation Factor	0.003
Dielectric Constant @ 1,000 Hz	3.12
Volume Resistivity	1.47 x 10 ¹⁵ ohm-cm

UL LISTED (FILE NUMBER QMFZ2.E205830)	
UL-94 V-0	3.0 mm

THERMAL PROPERTIES ***	
PROPERTY	RESULT
Thermal Conductivity	~ 0.37 W/m-K

*** Results based on similar material.

MIXING

In order to achieve optimum performance the same lot number of QSil 545 A and QSil 545 B should be used. Mixing equipment is recommended for this material due to the fast cure time. **QSil 545 A and QSil 545 B should be thoroughly mixed prior to catalyzation.**

Mixing by hand

Catalyze QSil 545 A with QSil 545 B at a 1:1 ratio by weight, using a clean plastic or metal container of approximately three 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. Mix until the material is uniform with no visible striations. This material is fast curing; therefore, hand mixing is not recommended, and machine mixing is the preferred method of mixing.

Mixing and dispensing with automatic equipment

Use a mixing system that will properly mix the QSil 545 A and QSil 545 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.

Technical Data Sheet

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