

## Technical Data Sheet

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### QSiil 550SB Self-Priming, Silicone Potting Material

#### PRODUCT DESCRIPTION

QSiil 550SB is a 100% silicone solids elastomer designed for electronic potting applications. The two-component system offers a hard, thermally conductive, low modulus material that is readily repairable.

#### KEY FEATURES

- 100% solids - no solvents
- Long pot life
- Low modulus
- Good elongation
- Primerless adhesion
- Heat cure required

#### TYPICAL PROPERTIES

UNCATALYZED		
PROPERTY	QSiil 550SB A	QSiil 550SB B
Appearance	Beige	Black
Viscosity	4,000 cps	4,000 cps
Specific Gravity	1.41	1.41

CATALYZED	
MIX RATIO 1:1	
Gel Time at 25 °C *	> 8 hours

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

HEAT CURED 20 minutes at 150 °C	
MIX RATIO 1:1	
PROPERTY	RESULT
Durometer	55, Shore A
Tensile	500 psi
Elongation	120%
Tear	20 ppi
100% Modulus	~ 300 psi

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ELECTRICAL PROPERTIES	
PROPERTY	RESULT
Dissipation Factor	0.003
Dielectric Constant at 1,000 Hz	3.12
Volume Resistivity	1.47 x 10 <sup>15</sup> ohm-cm

UL RATING**	
UL 94 V-0	3.0 mm
UL 94 V-1	1.5 mm

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

\*\* Results based on similar material.

### ADHESION

For best results the cure time/temperature profile shown below should be followed.

CURE PROFILE***	
TEMPERATURE	TIME
100°C	45 minutes
125°C	30 minutes
150°C	15 minutes

\*\*\*Material is not designed to cure at room temperature. Material may not reach full physical properties including adhesion, if cured below the minimum recommended cure temperature. These are recommended cure times only with actual cure times and temperatures dependent on the quantity of material being used and the shape of the part being made.

The table above is only a guide and the required cure time for adhesion will vary for different substrates. 100 °C for 45 minutes is the minimum cure profile that is required to obtain cure and adhesion to many substrates. It is recommended that the material be tested on the actual substrates to be used.

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### **MIXING**

In order to achieve optimum performance, the same lot number of QSil 550SB A and QSil 550SB B should be used.

QSil 550SB A and QSil 550SB B should be thoroughly mixed prior to catalyzation.

#### **Mixing by hand:**

Catalyze QSil 550SB A with QSil 550SB 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. Mix until the material is uniform with no visible striations.

#### **Mixing and dispensing with automatic equipment:**

Use a mixing system that will properly mix the QSil 550SB A and QSil 550SB 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".

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](http://www.silicone-experts.cht.com)

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