

Technical Data Sheet

QSiil 559FC Addition Cure Potting Material

PRODUCT DESCRIPTION

QSiil 559FC 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 cure time for quick repairs
- Good elongation
- Low modulus

TYPICAL PROPERTIES

UNCATALYZED		
PROPERTY	QSiil 559FC A	QSiil 559FC B
Appearance	Beige	Black
Viscosity	2,000 cps	1,200 cps
Specific Gravity	1.32	1.32

CATALYZED	
MIX RATIO 1:1	
Gel Time at 25 °C *	10 minutes

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

CURED PROPERTIES	
15 minutes at 150 °C	
PROPERTY	RESULT
Durometer	46 Shore A
Tensile	250 psi
Elongation	70%

ELECTRICAL PROPERTIES	
PROPERTY	RESULT
Dissipation Factor	0.003
Dielectric Constant at 1,000 Hz	3.20
Volume Resistivity	1.16 x 10 ¹⁵ ohm-cm

Technical Data Sheet

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

THERMAL PROPERTIES **	
PROPERTY	RESULT
Thermal Conductivity**	~ 0.37 W/m-K
Useful Temperature Range	-55 °C – 204 °C

** Results based on similar material.

MIXING

In order to achieve optimum performance, the same lot number of QSil 559FC A and QSil 559FC B should be used.

QSil 559FC A and QSil 559FC B should be thoroughly mixed prior to catalyzation.

Mixing by hand:

Catalyze QSil 559FC A with QSil 559FC 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 559FC A and QSil 559FC 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.

Technical Data Sheet

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