



# Technical Data Sheet

## QSi 960

55 Shore A, Condensation Cure for Potting Applications

### PRODUCT DESCRIPTION

QSi 960 is a red, high temperature, self-leveling, two-component, condensation cure, silicone material primarily intended for potting applications.

The two applicable catalysts are 0.5% DBT by weight and 10% Deep Section Catalyst by weight which gives a self leveling material with a work life of approximately 60 minutes. The material will be fully cured after 24 – 36 hours at room temperature. The 0.5% catalyst level can be increased or decreased to obtain desired cure speed.

### KEY FEATURES

- Self-leveling
- Variable cure speed
- Excellent thermal stability
- Retention of elastomeric properties within the temperature range of - 115°C – 260°C

### TYPICAL PROPERTIES

UNCATALYZED			
TEST	QSi 960	DBT Catalyst	Deep Section Catalyst
Appearance	Red	Clear/light yellow	Beige
Viscosity	24,000 cps	N/A	6,500 cps
Specific Gravity	1.42	1.04	1.47
Percent solids	100%	N/A	N/A

CATALYZED	
MIX RATIO 10:1 with Deep Section Catalyst or 100:0.5 for DBT Catalyst	
PROPERTY	RESULT
Appearance	Red
Gel time at 25°C *	60 minutes
Rheology	Self leveling

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



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<b>CURED PROPERTIES</b>	
<b>24 hours @ room temperature</b>	
<b>PROPERTY</b>	<b>RESULT</b>
Durometer, Shore A	60
Tensile	500 psi
Elongation	130 %
Tear	20 pli
Useful temperature range	- 55°C – 260°C

<b>ELECTRICAL PROPERTIES</b>	
<b>PROPERTY</b>	<b>RESULT</b>
Dielectric strength	550 V/mil
Dielectric constant @ 1000 Hz	3.9
Dissipation factor @ 1000 Hz	0.02
Volume resistivity	$2 \times 10^{14}$ ohm-cm

### **MIXING**

If using QSi Deep Section Catalyst as the curing agent, it should be thoroughly mixed prior to use.

QSi 960 should be catalyzed by weight with the appropriate amount of curing agent. A concentration of 0.5% DBT catalyst or 10% Deep Section Catalyst will provide a gel time approximately 60 minutes and a cure time of 24 hours. Cure may be accelerated by using DBT catalyst in increments of 0.1%.

Material should be mixed in a clean, compatible metal or plastic container. The volume of the container should be 4 – 5 times the volume of the material to be catalyzed. Thoroughly mix using clean tools, scraping the bottom and the side of the container to produce a homogeneous mixture.

### **DE-AERATION**

Air trapped during mixing should be removed to eliminate voids in the cured product. Vacuum de-airing may be necessary to completely remove all entrapped air bubbles. To ensure proper de-airing, subject the mixed material to 29 inches of mercury. When using QSi 960 for potting, a deaeration step may be necessary after pouring to avoid capturing air in complex assemblies.



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### DEEP SECTION CURE

Cured QSi 960 should be properly conditioned prior to service if it is to be used in deep sections at temperatures over 150°C (32°F). Following room temperature cure of 1 – 3 days, a typical program would be eight hours at 50°C intervals from 100°C (212°F) to the service temperature. Longer times at each temperature will be required for larger parts of very deep sections.

### BONDING

QSi 960 rubber compounds require a primer to bond to non-silicone surfaces. Thoroughly clean the substrate with a non-oily solvent such as naphtha or methyl ethyl ketone (MEK) and let the surface dry. Then apply a uniform thin film of a suitable silicone primer to air dry for one hour or more.

### STORAGE AND SHELF LIFE

If QSi 960 is stored in an environment that does not exceed 4°C (40°F) then QSi will warranty the material for a period of 6 months from the date of shipment. If QSi 960 is stored in an environment that is between 4°C (40°F) and 27°C (80°F) then QSi will warranty the material for a period of 3 months from the date of shipment.

### DISCLAIMER

The technical data listed is provided for reference only and is not intended as product specifications. QSi has the capability to customize products as requested. For sales and technical assistance please contact customer service at (804) 271-9010 or 1-800-852-3147.

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