



Technical Data Sheet

QSi 960

*Quantum Silicones' 55 Durometer Condensation Cure
for Potting Applications*

Product Description

QSi 960 is a red, high-temperature, self-leveling, 2-component silicone material primarily intended for potting applications. This material is supplied as base and can be used with 2 different catalysts. This material can be catalyzed with 0.5% DBT Catalyst and the catalyst level can be increased or decreased to obtain the desired cure speed. For application requiring a deeper cure, Deep Section Catalyst can also be used at a 100 parts of base to 10 parts Deep Section Catalyst, **by weight**. Once mixed, the material is self-leveling and will have a useful work-life of approximately 60 minutes. The material will be fully cured after 24-36 hours at room temperature. This material can also be vulcanized at elevated temperatures to increase the cure speed.

Key Features

- Self-Leveling
- Variable cure speed
- Excellent thermal stability
- Retention of Elastomeric properties within the temperature range -115°C to 260°C

Typical Properties

| UNCATALYZED PROPERTIES | | |
|---------------------------------|--------------------------|------------------------------|
| Color Base component | Red | |
| Viscosity Base component | <30,000cps | |
| Specific Gravity Base component | 1.42 | |
| Percent Solids | 100% | |
| CATALYST | DBT Catalyst | Deep Section Catalyst |
| Catalyst Color | Clear/Light yellow | Beige |
| Mix Ratio | 100:0.5 by weight | 10:1 by weight |

| Catalyzed Properties | |
|-----------------------------|---------------|
| Appearance | Red |
| Rheology | Self-Leveling |
| Work Life, minutes | 60 |
| Durometer, 24 hour | 50 (+/- 5) |
| Specific Gravity | 1.42 |
| Tensile, psi | 500 |
| Elongation, % | 100 |
| Tear, pi | 20 |

| Typical Electrical Properties | |
|--------------------------------------|------------|
| Dielectric Strength, V/mil | 550 |
| Dielectric Constant @1000Hz | 3.9 |
| Dissipation Factor @ 1000Hz | 0.02 |
| Volume Resistivity, ohm-Cm | 2 x 10 E14 |

Instructions for Use

Mixing

Select a mixing container 4-5 times larger than the volume of QSil 960 silicone rubber compound to be used. Weight out the QSil 960 base compound and add the appropriate amount of curing agent. 0.5% CAT by weight will provide a work time or pot life of about one hour and a cure time of 24 hours. 0.5% CAT is the most commonly used concentration. The pot life may be lengthened by using less CAT (as little as 0.1% CAT). With clean tools, thoroughly mix the QSil960 base compound and the curing agent, scraping the sides and bottom of the container carefully to produce a homogeneous mixture.

De-aeration

Air trapped during the mixing should be removed to eliminate voids in the cured product. Degassing is usually complete about two minutes after frothing ceases. When using the QSil 960 for potting, a de-aeration step may be necessary after pouring to avoid capturing air in complex assemblies.

Deep Section Cure

If these QSil 960 silicone rubber compounds are to be used in deep sections at temperatures over 150C (302F), the cured product should be properly conditioned prior to service. Following room temperature cure of 1-3 days, a typical program would be eight hours at 50C intervals from 100C (212F) to the service temperature. Longer times at each temperature will be required for larger parts of very deep sections.

Bonding

If adhesion is an important application requirement, QSil 960 silicone 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 dry. Then apply a uniform thin film of a suitable silicone primer to air dry for one hour or more.

Not for Product Specification

The technical data listed herein is provided as a reference only and **is not** intended as sales specifications. For sales and technical assistance or for product recommendations, please call 1-800-852-3147.

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