



Technical Data Sheet

QSi 40

*Quantum Silicones' 40 Durometer Condensation Cure
for Potting Applications*

Product Description

QSi 40 is a general purpose, 2-part room temperature condensation cure siloxane elastomer. The material is supplied as base and can be used with 2 different catalysts. This material can be catalyzed with 0.5% DBT catalyst which gives a work-life of approximately 45 minutes and a tack-free time of 4 hours. The cure can be modified by changing the amount of catalyst added to the base. To extend the work-life, adding as little as 0.1% of DBT catalyst can be done without changing the final physical properties. Additionally, this material can be catalyzed with 10% Deep Section Catalyst for applications requiring a deeper cure.

In addition, QSi 40 exhibits excellent release properties unless a primer is used which results in excellent adhesion. The material can also be used for applications that have wide temperature range requirements as it has a use temperature range of -50C to 200C.

Key Features

- Self-Leveling
- Variable cure speed

Typical Properties

UNCATALYZED PROPERTIES		
Color "A" component	White	
Viscosity "A" component	11,000	
Specific Gravity "A"	1.20	
Hegman Grind	3	
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	
Work Time	45
Tack Free Time, hr	4
24 hr RT Sheet Physicals	
Hardness	40
Tensile, psi	189
Elongation, %	170
Tear B, ppi	20
Useful Temperature Range	-50 to 200°C

Instructions for Use

Mixing

Select a mixing container 4-5 times larger than the volume of QSil 40 silicone rubber compound to be used. Weight out the QSil 40 base compound and add the appropriate amount of curing agent. 0.5% DBT Catalyst or 10% Deep Section Catalyst, **by weight**, will provide a work time or pot life of about one hour and a cure time of 24 hours. The pot life may be lengthened by using less DBT Catalyst (as little as 0.1% DBT Catalyst). With clean tools, thoroughly mix the QSil 40 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 40 for potting, a deaeration step may be necessary after pouring to avoid capturing air in complex assemblies.

Deep Section Cure

If these QSil 40 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 40 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.

Storage and Shelf Life

QSil 40 should be stored in the original unopened container at less 4C (40F). It will remain useful for a period of 12 months if stored under those conditions. QSil 40 will have a useful shelf life of 3 months when stored at less than 27C (80F).

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 1-866-852-3157.

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