



Technical Data Sheet

QSi 223

Transparent, Liquid Silicone Rubber

PRODUCT DESCRIPTION

QSi 223 is a two-part, clear, liquid silicone which will cure at room temperature or at elevated temperatures. It has a low viscosity which allows for ease of flow around complex parts, providing electrical insulation and shock resistance. The chemical composition provides hydrolytic and reversion resistance.

KEY FEATURES

- Convenient 1:1 mixing ratio for use in automatic dispensing equipment or hand mixing
- Contains no solvents
- Non-yellowing catalyst system

TYPICAL PROPERTIES

UNCATALYZED		
TEST	QSi 223 A	QSi 223 B
Color	Clear	Clear
Viscosity	3,200 cps	2,400 cps
Specific Gravity	1.03	1.03

CATALYZED	
MIX RATIO 1:1 by weight	
Color	Clear, colorless
Consistency	Easily pourable
Gel time at 25°C *	~ 2 hours

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

CURED PROPERTIES	
PROPERTY	RESULT
Durometer, Shore A, 24 hours @ room temperature	51
Durometer, Shore A, 1 hour @ 70°C	53
Durometer, Shore A, 1 hour @ 150°C	65
Linear shrinkage	< 0.1 %

UL LISTED (FILE NUMBER QMFZ2.E205830)	
UL-94 HB rated	1.7 mm



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ELECTRICAL PROPERTIES	
PROPERTY	RESULT
Dielectric strength	500 V/mil
Dielectric constant @ 1000Hz	2.69
Dissipation factor @ 1000Hz	0.0006
Volume resistivity	1.7×10^{15} ohm-cm

THERMAL PROPERTIES	
PROPERTY	RESULT
Thermal conductivity	0.18 W/m-K
Coefficient of thermal expansion, cm/cm, °C	27.5×10^{-5}
Specific heat	0.3 cal/g-C
Useful temperature range	- 55°C – 204°C

OPTICAL PROPERTIES	
PROPERTY	RESULT
Refractive index, 589 nm	1.405
Transmittance, 400 nm, 1mm path	> 98.0 %

MIXING

QSi 223 A is catalyzed with QSi 223 B at a 1:1 ratio by weight. In order to achieve optimum performance the same lot number of QSi 223 A and QSi 223 B should be used.

Combine one part of QSi 223 A with one part of QSi 223 B by weight into a clean, compatible container. The volume of the container should be 3-4 times the volume of the material to be mixed. Mix by hand or with mixing equipment until a homogeneous mixture is obtained. When hand mixing; accurate weighing of components on a suitable scale is essential for optimal product performance.

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. Typically after releasing the vacuum 2 - 3 times, the mass will collapse on itself at which time the vacuum should be left on for an additional 2 - 4 minutes.

Machine mixed material does not normally need to be de-aired.



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STORAGE AND SHELF LIFE

If QSi 223 A and QSi 223 B are stored in their original unopened containers, in an environment that does not exceed 38°C (100°F) then QSi will warranty the material for a period of 12 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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Quantum Silicones Headquarters

*7820 Whitepine Road
Richmond, VA 23237*

Manufacturing, Research and Development Facility

*8021 Reycan Road
Richmond, VA 23237*

Phone: 804-271-9010

Fax: 804-271-9055

Toll Free: 800-852-3147