



Technical Data Sheet

QSi 222

Transparent, Liquid Silicone Rubber

PRODUCT DESCRIPTION

QSi 222 is a two-part, clear, liquid silicone which cures 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. This material also has excellent primerless adhesion to most substrates.

KEY FEATURES

- Convenient 10:1 mixing ratio for use in automatic dispensing equipment or hand mixing
- Contains no solvents
- Non-yellowing catalyst system
- Heat cure required to obtain full properties and adhesion

TYPICAL PROPERTIES

UNCATALYZED		
TEST	QSi 222 A	QSi 222 B
Color	Clear	Clear
Viscosity	2,390 cps	282 cps
Specific Gravity	1.02	1.00

CATALYZED	
MIX RATIO 10:1 by weight	
Color	Clear, colorless
Consistency	Easily pourable
Gel time at 25°C *	> 24 hours

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

CURED PROPERTIES	
60 minutes at 150°C	
PROPERTY	RESULT
Durometer, Shore A	40
Tensile	332 psi
Elongation	128 %
Linear shrinkage	< 0.1 %



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CURE SCHEDULE*	
TEMPERATURE	TIME
150°C	60 minutes
100°C	120 minutes

*Material is not designed to cure at room temperature. Material may not reach full physical properties including adhesion, if cured below the minimum recommended cure temperature. These are recommended cure times only with actual cure times and temperatures dependent on the quantity of material being used and the shape of the part being made.

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

MIXING

QSi 222 A is catalyzed with QSi 222 B at a 10:1 ratio by weight. In order to achieve optimum performance the same lot number of QSi 222 A and QSi 222 B should be used.

Combine ten parts of QSi 222 A with one part of QSi 222 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 222 A and QSi 222B 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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