



Technical Data Sheet

QSi 218

Transparent, Liquid Silicone Rubber

PRODUCT DESCRIPTION

QSi 218 is a two-part, clear, liquid silicone. 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 10:1 mixing ratio for use in automatic dispensing equipment or hand mixing
- Contains no solvents
- Non-yellowing catalyst system

TYPICAL PROPERTIES

UNCATALYZED		
TEST	QSi 218 A	QSi 218 B
Color	Clear	Clear
Viscosity	3,850 cps	530 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 *	~ 6 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 100°C/212°F	
PROPERTY	RESULT
Durometer, Shore A	59
Tensile	968 psi
Elongation	107 %
Linear shrinkage	< 0.1 %
Refractive index	1.406



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CURE SCHEDULE*	
TEMPERATURE	TIME
150°C	30 minutes
100°C	60 minutes
60°C	180 minutes

*Material may not reach full physical properties 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	
Dielectric strength	500 V/mil
Dielectric constant @ 1000 Hz	2.69
Dissipation factor @ 1000 Hz	0.0006
Volume resistivity	1.7×10^{15} ohm-cm

THERMAL PROPERTIES	
Useful temperature range	- 55°C – 204°C
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

MIXING

QSi 218 A is catalyzed with QSi 218 B at a 10:1 ratio by weight. In order to achieve optimum performance the same lot number of QSi 218 A and QSi 218 B should be used.

Combine ten parts of QSi 218 A with one part of QSi 218 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. Accurate weighing of all components, on a suitable scale, is essential for optimal product performance when mixing by hand.

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 218 A and QSi 218 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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