Technical Data Sheet

QSil 13

Clear, Low Viscosity, Condensation Cure, Liquid Silicone Material for Coating and Potting Applications

PRODUCT DESCRIPTION

QSil 13 is a clear, low viscosity, two-component, liquid silicone material which cures at room temperature and can be used for coating or potting applications. This material is typically mixed at a ratio of 100:5. Once mixed, the material is self-leveling and will have a useful work-life of approximately two hours. The material will be fully cured after 24 - 48 hours at room temperature. This material can also be vulcanized at elevated temperatures (up to 70°C) to increase the cure speed.

KEY FEATURES

- Low viscosity
- Variable cure speed, with mild heat
- Transparency
- Room temperature cure
- Good adhesion with use of a primer

TYPICAL PROPERTIES

UNCATALYZED		
TEST	**QSil 13**	**QSil Cat 12**
Appearance	Water white	Clear, slight yellow
Viscosity	650 cps	15 cps
Specific Gravity	0.98	0.85
Solvent	None	Mineral Spirits

CATALYZED	
MIX RATIO 100 : 5 by weight(Base : Catalyst)	
TEST	**RESULT**
Gel Time at 25°C *	120 minutes
Specific gravity	0.98
Durometer, Shore A, 24 hour	12
Durometer, Shore A, 72 hour	18
Useful temperature range	- 55°C – 204°C

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

ELECTRICAL PROPERTIES	
Dielectric Strength	400 V/mil
Dielectric Constant	3.0
Dissipation Factor	0.001
Volume Resistivity	1 X 10^{13} ohm-cm

MIXING

QSil 13 should be catalyzed by weight with the appropriate amount of curing agent. The most commonly used curing agent concentration is 5% of QSil Cat 12. This concentration will provide a gel time of approximately 2 hours and a cure time of approximately 24 hours.

Material should be mixed in a clean, compatible metal of plastic container. The volume of the container should be 4 – 5 times the volume of the material to be catalyzed. Thoroughly mix using clean tools, scraping the bottom and the side of the container to produce a homogeneous mixture.

DE-AERATION

Air trapped during mixing should be removed to eliminate voids in the cured product. Vacuum de-airing may be necessary to completely remove all entrapped air bubbles. To ensure proper de-airing, subject the mixed material to 29 inches of mercury. When using QSil 13 for potting, a de-aeration step may be necessary after pouring to avoid capturing air in complex assemblies.

BONDING

QSil 13 silicone rubber compounds require the use of a primer to bond to a non-silicone surface. 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 silicone primer and allow time to dry for one hour or more.

STORAGE AND SHELF LIFE

If QSil 13 is stored in the original unopened container, in an environment that does not exceed 38°C (100°F) then QSi will warranty the material for a period of 6 months from the date of shipment.

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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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