TECHNICAL DATA SHEET

QSil 940
Condensation cure for potting applications

Description

This is a special purpose, two-component, condensation cure, siloxane elastomer that 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.

The two applicable catalysts are 0.5% DBT by weight and 10% Deep Section Catalyst by weight which gives a work life of approximately 45 minutes and a tack free time of two hours. The 0.5% catalyst level can be increased or decreased to obtain desired cure speed. Cure speed can be accelerated by adding DBT catalyst in increments of 0.1%.

Key Features

- Excellent release properties unless a primer is used
- Variable cure speed

Application

Potting

Use and Cure Information

CATALYSTS		
TEST	**DBT Catalyst**	**QSil Deep Section Catalyst**
Appearance	Clear/light yellow	Beige
Viscosity	N/A	6,500 cps
Specific Gravity	1.04	1.47

Property	Test Method	Value
Uncured Product		
Cure Profile		**24 hrs at 25°C**
Cure Type		**Condensation**
Gel Time at 25°C/77°F		**45 minutes**
Mix Ratio By Weight		**100:0.5 or 10:1**
Rheology		**Liquid**
Specific Gravity		**1.20**
Viscosity	Brookfield	**12,000 cP**
Cured Product		
24 hours at 25°C		
Color		**White**
Elongation at Break	ISO 37	**170 %**
Hardness Shore A	ASTM D 2240-95	**40**
Max Working Temp		**204 °C / 399 °F**
Min Working Temp		**-115 °C / -175 °F**
Tear Resistance (N/mm)	BS ISO 34-1	**3.47 N/mm / 20 ppi**
Tensile Strength	ISO 37	**1.31 N/mm2 / 190 psi**
Storage		
Max Storage Temperature		**4.4 °C / 40 °F**
Shelf Life		**12 mths**

MIXING

If using QSil Deep Section Catalyst as the curing agent, it should be thoroughly mixed prior to use. The base should be catalyzed by weight with the appropriate amount of curing agent. A concentration of 0.5% DBT catalyst or 10% Deep Section Catalyst will provide a gel time approximately 45 minutes and a tack free time of 2 hours. Cure can be accelerated by adding DBT catalyst in increments of 0.1%.

Material should be mixed in a clean, compatible metal or 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. CAUTION: Avoid prolonged mixing with power tools as excess heat may build up and shorten the expected work life of the material.

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 this material for potting, a de-aeration step may be necessary after pouring to avoid capturing air in complex assemblies.

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