Technical Data Sheet

QSil430 (QSil430)
Flame Retardent Encapsulant

Introduction

QSil430 is a 2-component room temperature vulcanising silicone rubber system that is employed as an encapsulant for sensitive electrical and electronic assemblies.
It is cured by the addition of A and B parts to produce a moderately hard silicone rubber, which offers good protection against chemicals and environmental contamination, shock and vibration.
The component parts have relatively low viscosities and are readily mixed in a simple **1:1 by volume or 1:1.45 by weight** ratio.

Key Features

- **UL94 V0 Approved**
- **Excellent adhesion to most substrates**
- **Fast room temperature cure**
- **Good electrical properties**

Applications

QSil430 is recommended for potting, embedding and encapsulating delicate electrical and electronic equipment; sealing and caulking.

Use and Cure Information

Mixing
The A and B parts of the rubber must be mixed thoroughly with to produce a uniformly cured product. Mixing can be carried out mechanically or by hand, but care should be taken to avoid trapping air in the mixture since this can cause voids in the cured rubber.

De-aeration
For applications where such voids are undesirable the mixture should be de-aerated under reduced pressure before use.
The time and pressure required for de-aeration depends on the quantity of the liquid being used. As a guide, 150g of base liquid can be de-aerated in 5-10 minutes at a pressure of 5-10 mm of mercury. Containers should be only two-thirds full to prevent overflow during the initial stages of de-aeration.

Curing
The curing process begins, without exotherm, immediately the liquid and curing agent are mixed together.
Ambient temperature and humidity conditions are considered to be 15 to 30ºC and 50 to 70% Relative Humidity.
It is recommended that no heat should be applied to accelerate cure as this can have adverse effects on the properties of the cured rubber.

Cure Time @ 25ºC **5 hrs**

Revision Date: 09/06/2008

Property	Test Method	Value
Uncured Product		
Colour A Part:		**White**
Colour B Part:		**Black**
Appearance:		**Viscous Liquid**
Viscosity A Part:	Brookfield	**12000 mPa.s**
Viscosity B Part:	Brookfield	**40000 mPa.s**
Catalysed viscosity	Brookfield	**25000 mPa.s**
Pot Life:		**14 minutes ***
* measured at 23+/-2°C and 65% relative humidity		
Cured Elastomer		
(after 7 days cure at 23+/-2°C and 65% relative humidity)		
Colour		**Grey**
Tensile Strength:	BS903 Part A2	**1.31 MP**
Elongation at Break:	BS903 Part A2	**191 %**
Youngs Modulus:		**0.801 MPa**
Modulus at 100% Strain:	BS903 Part A2	**0.77 MPa**
Hardness:	ASTM D 2240-95	**33° Shore A**
Specific Gravity:	BS 903 Part A1	**1.35**
Thermal Conductivity:		**0.30** W/mK
Coefficient of Thermal Expansion:		
Volumetric		**613 ppm / °C**
Linear		**184 ppm / °C**
Min. Service Temperature:		**-55°C**
Max. Service Temperature:	AFS 1540B	**250 °C**

Electrical Properties

Surface Resistivity

Volume Resistivity:	ASTM D-257	**>1E+15 Ω.cm**
Dielectric Strength:	ASTM D-149	**18kV/mm**

Flammability

UL94 V-0 Rated **Yes**

Adhesion

Self Bonding **Yes**

All values are typical and should not be accepted as a specification.

Health and Safety - Material Safety Data Sheets available on request.

Packages – ACC Addition encapsulants are supplied in a range of pack sizes please contact the sales office for details

Arrangements can be made to supply in other pack sizes.

Storage and Shelf Life – Expected to be **6** months in original, unopened containers below 30°C

ACC Silicones Ltd, Amber House,
Showground Road, Bridgwater, Somerset, UK
Tel. +44(0)1278 411400 Fax. +44(0)1278 411444

Treco S.R.L., Via Romagna N.8,
20098 Sesto Ulteriano (MI), Italia.
Tel. 39/02/9880913 Fax. +39/02/98280413

www.acc-silicones.com