Technical Data Sheet

QSil556 ()
2-Part Addition Cure Encapsulant

Introduction

QSil556 is a 2-component, silicone elastomer system specially designed for electronic potting applications.
It offers good protection against impact damage and can be employed in areas where low flammability is a prerequisite.
The cured product is a hard, medium to high modulus elastomer that can be repaired.
The component parts have relatively low viscosities and are readily mixed in a simple **1:1** ratio.

Key Features

- **100% active solvent free**
- **Low flammablility**
- **Simple 1:1 mix ratio**
- **Low viscosity**

Use and Cure Information

How to Use

IMPORTANT: QSil556 contains the platinum catalyst, great care should be taken when using automatic dispensing equipment. Please ensure that it is not contaminated by residual hydride containing rubber in the dispensing equipment, as curing will result. If in doubt, it's advised to thoroughly purge the equipment with a suitable hydrocarbon solvent or silicone fluid.

Mix both the A and B parts gently to ensure homogeneity. Place the required amount of A and B parts by weight at the ration of **1:1** (A to B) in a clean plastic or metal container of approximately 3 times their volume, and mix until the colour of the mixture is uniform.
Degas by intermittent evacuation, the larger volume of the mixing vessel helps prevent overflow during this operation. In case of automatic dispensing with static mixing head, the two components should be degassed before processing. Recommended vacuum conditions are 30-50 mbar intermittently over 5-10 minutes.
Cast the mixture either by gravity or pressure injection.

Curing Conditions

The following table offers a guide to the rate of cure of **QSil556** at various temperatures, mixing of the components between 15 and 25°C is recommended to ensure adequate pot life for degassing and handling. The pot life can be extended to several hours by chilling the components.

Temperature, °C	Max Cure Time
25	**24** hrs
100	**15** mins

Inhibition of Cure

Great care must be taken when handling and mixing all addition cured silicone elastomer systems, that all the mixing tools (vessels and spatulas) are clean and constructed in materials which do not interfere with the curing mechanism. The cure of the rubber can be inhibited by the presence of compounds of nitrogen, sulphur, phosphorus and arsenic; organotin catalysts and PVC stabilizers; epoxy resin catalysts and even contact with materials containing certain of these substances e.g. moulding clays, sulphur vulcanised rubbers, condensation cure silicone rubbers, onion and garlic.

Property	Test Method	Value
Uncured Product		
Colour A Part:		**Beige**
Colour B Part:		**Black**
Appearance:		**Dark grey viscous liquid**
Viscosity A Part:	Brookfield	**1100 mPa.s**
Viscosity B Part:	Brookfield	**2300 mPa.s**
Catalysed viscosity	Brookfield	**1700 mPa.s**
Pot Life:		**65 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	**1.90 MP**
Elongation at Break:	BS903 Part A2	**75 %**
Hardness:	ASTM D 2240-95	**46° Shore A**
Specific Gravity:	BS 903 Part A1	**1.38**
Thermal Conductivity:		**0.32 W/m**
Coefficient of Thermal Expansion:		
Volumetric		**700 ppm / °C**
Linear		**233 ppm / °C**
Min. Service Temperature:		**-50°C**
Max. Service Temperature:	AFS 1540B	**275 °C**

Electrical Properties

Surface Resistivity

Volume Resistivity:	ASTM D-257	**1E+14 Ω.cm**
Dielectric Strength:	ASTM D-149	**17.5kV/mm**
Dielectric Constant at 1 kHz:	ASTM D-150	**3.1**

Flammability

UL94 V-0 Rated **Yes**

Adhesion

Self Bonding **No**

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 **24** months in original, unopened containers below 30°C

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