

QGel 330 Tough, low viscosity silicone gel

Introduction

QGel330 is one of a family of soft, adherent, clear silicone elastomeric gels designed for the encapsulation and protection of electronics components. It is a low viscosity, 2-component system that is readily mixed in a 1:1 ratio.

It is used to provide protection from vibration, thermal or mechanical shock. It has excellent dielectric properties and also gives excellent protection from water and many environmental contaminants.

Key Features

- **Low viscosity**
- **High purity**
- **Resilient gel**
- **Excellent adhesion**

Use and Cure Information

How to Use

QGel330 is supplied in several pack sizes and consists of kits containing equal quantities of Parts 'A' and 'B'. Containers should always be kept sealed when not in use, and all mixing equipment must be clean and free from contaminants such as organo-tin, -sulphur, -nitrogen compounds which can poison the catalyst and prevent proper cure.

Application and Cure

Each of the **QGel330** component parts should be mixed in the recommended one-to-one ratio (by volume or weight). This can be done readily either by hand or using a powered mixer, avoiding excessive aeration. The curing process begins as soon as the components are mixed and the working or pot life of the mixed system is dependent on the ambient temperature conditions.

Note: Chilling the separate component parts, before and after mixing, will extend the pot life, but not indefinitely.

Adhesion

Fully cured **QGel330** exhibits good adhesion to most substrates such as:
Aluminium, stainless steel, ABS, polycarbonate, PCB boards, Nylon 6,6

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:		Transparent
Appearance:		Clear liquid
Viscosity A Part:	Brookfield	700 mPa.s
Viscosity B Part:	Brookfield	650 mPa.s
Catalysed viscosity	Brookfield	675 mPa.s
Pot Life:		45 minutes*
*measured at 23+/-2°C		

Cured Elastomer

(After 7 days cure at 23+/-2°C)

Hardness	Shore 00	38
Specific Gravity:	BS 903 Part A1	0.97
Min. Service Temperature:		-55 °C
Max. Service Temperature:	AFS 1530B	200 °C

Electrical Properties

Volume Resistivity:	ASTM D-257	1.5 E+14 Ω.cm
Dielectric Strength:	ASTM D-149	>18.5 kV/mm

Curing Time

Temperature °C	Time
25	20 hrs
100	60 mins

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

Health and Safety

Material Safety Data Sheets are available on request

Packages

QGels are normally packed in 2kg, 10 kg and 40 kg kits

Storage and Shelf Life

Expected to be 12 months in original, unopened containers below 40°C

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