TECHNICAL DATA SHEET

CHT
SMART CHEMISTRY WITH CHARACTER.

QGel 410
General Purpose Silicone Gel

Description

This is one of a family of soft, adherent, silicone elastomeric gels designed for the encapsulation and protection of electronic 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 and protection from water and many environmental contaminants. It has excellent dielectric properties.

Key Features

- one to one mix ratio
- heat cure
- soft but resilient gel
- Dispensing equipment not necessary

Key Applications

- encapsulation
- electropotting
- moisture protection

Application

QGel 410 is a clear, very soft, tough, moderately cross-linked silicone polymer. Silicone gels are used to provide protection from vibration, thermal or mechanical shock. Silicone gels also provide excellent moisture protection.

Use and Cure Information

IMPORTANT:

In order to achieve optimum performance, the same lot number of the A and B components should be used. Mixed lots may not obtain the performance criteria listed on the TDS or Certificate of Analysis.

The 'A' part of the product 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 (Part B) in the dispensing equipment, as curing will result. If in doubt, it is advised to thoroughly purge the equipment with a suitable hydrocarbon solvent or silicone fluid.

Property	Test Method	Value
Uncured Product		
Appearance		**transparent**
Color A		**transparent**
Color B		**transparent**
Density A	BS ISO 2781	**0.97**
Density B	BS ISO 2781	**0.97**
Max Cure Mins @ 100 °C		**60 mins**
Mix Ratio By Weight		**1:1**
Pot Life hrs at 23°C/73°F		**24 - 48 hours**
Self Bonding		**Silicone gels have a tacky surface and will form a mechanical bond to most substrates**
Viscosity A	Brookfield	**500 - 700 cP**
Viscosity B	Brookfield	**400 - 600 cP**
Viscosity Mixed	Brookfield	**500 - 600 cP**
Cured Product		
25 °C		
Color		**Transparent**
Density	BS ISO 2781	**0.97 g/cm3**
Max Working Temp		**200 °C / 392 °F**
Min Working Temp		**-55 °C / -67 °F**
Storage		
Max Storage Temperature		**38 °C / 100 °F**
Min Storage Temperature		**> 0 °C / 32 °F**
Shelf Life		**12 mths**

Mixing

Both the ‘A’ and ‘B’ parts should be well stirred to ensure the material is uniform and any settled the fillers have been remixed.

Place the required amount of ‘A’ and ‘B’ parts by weight at the mix ratio shown opposite, in a clean plastic or metal container of approximately 3 times their volume, and mix until the colour of the mixture is uniform. For best results, we recommend degassing. Degas by intermittent evacuation, the larger volume of the mixing vessel helps prevent overflow during this operation. In the 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.

Inhibition of Cure

Great care must be taken when handling and mixing all addition cured silicone elastomer systems, ensuring 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.

Curing Conditions

The data offers a guide to the rate of cure at various temperatures, mixing of the components at temperatures 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 before mixing.

It is important to check the compatibility in preliminary tests if unknown substrates are used.

Health & Safety

Safety Data Sheets available on request.

Packaging

CHT Gels are available in a variety packaging including bulk containers. Please contact our sales department for more information.

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CHT Germany GmbH: Postfach 12 80, 72002 Tübingen, Bismarckstraße 102, 72072 Tübingen, Germany
Telephone: 07071/154-0, Fax: 07071/154-290, Email: info@cht.com, Homepage: www.cht.com / www.cht-silicones.com

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CHT Germany GmbH: Postfach 12 80, 72002 Tübingen, Bismarckstraße 102, 72072 Tübingen, Germany
Telephone: 07071/154-0, Fax: 07071/154-290, Email: info@cht.com, Homepage: www.cht.com / www.cht-silicones.com