

**INDUSTRY  
SOLUTIONS.**

**Material  
Solutions.**

**CHT**  
SMART CHEMISTRY  
WITH CHARACTER.

## **WORLD CLASS SILICONES FOR WORLDWIDE SOLUTIONS**

**SILICONE ADHESIVE SEALANTS  
POTTING & ENCAPSULATION COMPOUNDS  
THERMAL TRANSFER MATERIALS  
CONFORMAL COATINGS  
GREASES & PRIMERS**

# SILICONES FOR TECHNICAL APPLICATIONS

CHT have over 40 years' experience manufacturing 1-Part adhesives for high performance applications. Using a variety of cure mechanisms, modifications can be made to the rheology, hardness, elasticity, cure speed, extrusion rate and compatibility with substrates.

## Industries served:

Aerospace, Electronics, Automotive, Photovoltaics, Lighting & LEDs, Food Processing, Offshore, Construction, Textiles, Medical, Marine, Solar, Rail, and Utilities

## Typical applications involve:

Bonding, Gasketing, FIPG, Sealing, Anti-slip for Surgical Appliances & Hosiery, Electrical Insulation, Environmental Protection, Coatings, Vibration Control

## ELECTRONIC GRADES

A range of non-corrosive adhesives specifically formulated for use in the electronics industry. Patented chemistry provides a wide range of physical properties to meet most application requirements.

## PHOTOVOLTAIC ADHESIVES

CHT adhesives are particularly well suited to the applications found in the Solar and Photovoltaic markets. These materials are neutral cure with excellent adhesion to the substrates used in PV manufacturing.

## HEAT CURED

Improve productivity with our platinum curing adhesives providing fast cure through in (5 – 10 mins) at temperatures between 100°C and 150°C.

## FOOD CONTACT

CHT have several adhesive sealants that can be used in food preparation areas and are suitable for food contact applications. For a more detailed explanation of FDA compliance see Data sheets.

- ▶ Neutral Cure non-corrosive
- ▶ High Temperature to +300°C
- ▶ Thermally Conductive
- ▶ RTV and Heat Cured



Modern electronic components require protection from vibration, harsh environmental conditions and excessive heat. CHT have a very wide range of compounds that will not only offer that protection but also transfer heat or transmit light.

### **POTTING AND ENCAPSULATION COMPOUNDS**

CHT have many products available for the general potting and encapsulation of electronic components. A range of hardnesses enable careful product selection ensuring that components are not damaged by thermal expansion during extreme temperature cycling.

#### **Products:**

- ▶ **UL 94 V-0 Approved**
- ▶ **Opaque and Optically Clear**
- ▶ **RTV and Heat Cured**
- ▶ **High Temperature to + 300 °C**

### **SILICONE GELS**

Silicone gels now perform key roles within many electronic and lighting applications. They are soft and resilient providing protection from vibration and shock without stressing delicate components. Optically clear gels with high refractive indexes improve light transmission in LED's and PV Modules.

- ▶ **Optically Clear**
- ▶ **Low Viscosity**
- ▶ **RTV and Heat Cured**
- ▶ **Thermally Conductive**

### **SILCOTHERM® THERMAL TRANSFER MATERIALS**

The transfer of heat away from sensitive components is a key design requirement in many electronic applications. CHT technicians have formulated a wide range of thermally conductive materials which can be used for bonding, sealing and encapsulating components.

- ▶ **Adhesives**
- ▶ **Potting Compounds**
- ▶ **Gap Fillers**
- ▶ **Non-Curing Pastes**

### **SILCOSET® BRAND**

The Silcoset® trade name is well respected within the aerospace industry as a high-performance range of silicone materials, including adhesive sealants and potting compounds. OEM's such as Rolls-Royce Aerospace, the UK MOD and BAE have approved these materials for use within their products.

- ▶ **High temperature stability**
- ▶ **Rolls-Royce, MOD Approved**
- ▶ **Resistance to many chemicals**
- ▶ **Adhesion to a range of substrates**



### MIL-A-46146B GRADES

Tested to meet the demanding MIL-A-46146B standard, this range of products have exceptional strength making them ideal for the most demanding of applications.

- ▶ High strength
- ▶ Fast cure and skinning times
- ▶ Wide Temperature -60°C to +316°C
- ▶ Flowable and Paste

### SILICONE PRIMERS

For difficult substrates or very demanding operating conditions the use of a suitable primer is recommended to improve adhesion. CHT have produced a comprehensive guide to primer and sealant selection and this is freely available on request or by visiting our web site.

- CHT primers can be used with
- ▶ 1 & 2 Part silicone elastomers
  - ▶ Addition and Condensation cure systems
  - ▶ Most plastics, wood, metals and glass

### SILICONE GREASE

Silicone greases are very durable and may be used to lubricate rubber, plastic and metal to rubber or plastic interfaces. They provide excellent protection against moisture and other harsh environmental conditions and high voltage insulation. Some are approved for use in aerospace, MOD and with potable water.

- ▶ High Voltage Insulation
- ▶ Thermally Conductive
- ▶ Water potable
- ▶ NATO Approved

### TWIN PACK ADHESIVES

CHT have produced two component accelerated cure adhesives which are supplied in a 10:1 cartridge system. The silicone is thoroughly mixed using a disposable static mixer with a specially designed gun.

- ▶ Fast cure times
- ▶ Robust gun
- ▶ Guaranteed correct mix ratio
- ▶ Clean and simple to use

### CONFORMAL COATINGS

For protection of PCB boards our range of coatings include acrylic and silicone. Room temperature cure coatings have 100% solids. Silicone coatings are environmentally friendly and cure without the use of expensive ovens.

- ▶ Low viscosities
- ▶ UV Trace for visual identification
- ▶ Solvent free materials
- ▶ Excellent adhesion



# MANUFACTURING SILICONE COMPOUNDS FOR OVER 40 YEARS

CHT have acquired an enviable reputation for producing high quality specialist chemicals which have been proven to perform to the highest standards in the most demanding applications. With the acquisition in 2017 of the ICM Silicones group, including ACC Silicones Ltd, Quantum Silicones and ICM Products, they have further enhanced their capabilities, industry knowledge and global reach within the silicone market. Key industries serviced include the aerospace, electronics and automotive industries.

CHT have extensive R&D facilities located throughout the world and much of our research work is focused on electrical and electronic applications developing coatings, thermal transfer compounds and neutral cure sealants. Our customer focused development programme and flexible production facilities enable us to keep pace with the needs of today's modern production methods and design requirements.

Qualified, experienced sales and technical staff are readily available to make site visits to advise on product selection and production methods. Our expertise extends into all areas of 1 and 2 part RTV silicone chemistry with a strong bias towards application based solutions.

The enlarged CHT silicones expertise enables our customers to benefit from technical and manufacturing support within Europe, China and the USA.

## BESPOKE SERVICE

Our adaptable facilities based upon batch production allow us to offer formulations developed to meet very specific application requirements. Subject to strict commercial evaluation we can chemically engineer our products and change any of the following properties:

- ▶ Rheology – paste to free-flowing low viscosity
- ▶ Cure speed and tack free times
- ▶ Thermal conductivity
- ▶ Hardness
- ▶ Colour
- ▶ Operating temperature range
- ▶ Cure mechanism
- ▶ Packaging and delivery systems

**We are CHT, Smart Chemistry with Character.  
Together with ICM, ACC and QSi we are the most customer centric specialty silicones expert. We are committed to finding your individual solution.**

**CHALLENGE US NOW!**

**Get in touch with us!  
[silicone-experts.cht.com](http://silicone-experts.cht.com)**





04/2019

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