SILICONE GEL SERIES

SOFT, PLIABLE, AND INSULATIVE SILICONE TECHNOLOGY
# Benefits of CHT’s Silicone Technology

## Silicone Gels Series

Silicone gels by CHT are used to protect delicate components and assemblies from vibration, thermal and mechanical shock, as well as guard against moisture corrosion and other atmospheric contaminants. These gels are two-part addition (platinum) cure systems, and most vulcanize at either room temperature or can be heat accelerated to obtain faster cure times. CHT’s silicone gels feature key properties, including low viscosities for easy dispensing, a range of durometers and penetrations, non-slumping thixo gels, and self-bonding capabilities. The majority of CHT’s silicone gels are clear, but can be color tinted for ease of visual identification.

### Customizable Properties of CHT’s Silicone Technology

- Refractive Index
- Penetration
- Useful Temperature Range
- Viscosity
- Adhesion
- Color / Tint
- Conduction
- Cure Speed
- Self-Bonding Grades Available
- Moisture Protection
- Excellent Shock and Vibration Resistance
- Room Temperature and Heat Curing
- Adhesion Packages Available to Obtain Curing Packages for Multiple Substrates
- Products with Low Temperature Capabilities to -110°C
- Non-Slumping, Thixotropic Grades
- Flame Retardant, UL Listed Grades Available (See UL File Number QMFZ2.E20580)

CHT’s team is available to consult with you on your unique application. Finding the right product for your application is not limited to our portfolio. Our silicone experts accept opportunities to either modify specifications in a current product or custom formulate a new one to meet your project’s exact requirements. CHT’s team is focused on building relationships and carefully listening to your requests, questions and feedback. With this approach, our team is then prepared to provide you with optimal silicone solutions that ultimately improve productivity and enhance performance.

## Silicone Gels Applications

### Aerospace

Aerospace applications require demanding physical properties for all sealants or encapsulants. CHT’s potting & encapsulating materials perform at either extremely low or high temperatures.

**Benefits of CHT’s Silicone Technology**

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### Automotive & Transportation

Various forms of silicone materials from CHT are designed to protect power supplies from thermal stress and help maintain their original properties in high voltage functions. These flexible compounds from CHT are used to coat wires, provide insulation for transformers and protect electronic controls.

**Benefits of CHT’s Silicone Technology**

- Moisture Protection
- High Thermal Conductivity Grades Available
- Repairable
- UL Listed Grades Available (See UL File Number QMFZ2.E20580)
- Low Modulus Materials Minimize CTE Strain
- Low Viscosity for Fast Dispensing
- Self-Bonding Grades Available

### Connectors

CHT’s silicone gels are used as durable encapsulants in high-performance electronic connector systems. These soft silicone gels protect leads inside the connectors from environmental contamination. Additionally, silicone gels by CHT have excellent resistance to thermal cycling, vibration and mechanical shock, and will reseal throughout multiple insertions.

**Benefits of CHT’s Silicone Technology**

- Moisture Protection
- Environmental Protection
- Higher Refractive Indices to Facilitate a Brighter and Longer Lasting Light
- Non-Yellowing Catalyst Systems Available
- Low Viscosity to Flow Around Complex Parts and Minimize Air Entrapment
- Excellent Thermal Stability
- Self-Bonding Grades Available
- UL Listed Grades Available (See UL File Number QMFZ2.E20580)

### Electronics

CHT’s silicone gels perform many key functions in electrical components. These soft, but resilient gels provide a protective barrier against moisture and environmental contaminants. They relieve mechanical and thermal stress that can often occur in high voltage devices. Additionally, specific properties such as adhesion, modulus, useful temperature range and conductivity can all be customized for your application.

**Benefits of CHT’s Silicone Technology**

- Low Viscosity Grades Allow for Easy Pouring and Potting Around Complex Parts
- Repairable and Self-Healing
- Grades Available that Contain a UV Tracer for Ease of Visual Identification
- Conductive Technology for Thermal Management
- Modulus Control Technology is Available to Customize CTE Strain
- Excellent Shock and Vibration Resistance
- Variety of Both Room Temperature and Heat Curing Materials
- Flame Retardant, UL Listed Grades Available (See UL File Number QMFZ2.E20580)

**Adhesion Packages Available to Obtain Primerless Adhesion to Various Substrates**

- Withstand Extreme Temperatures from -55°C to 200°C (Customized temperature ranges are available from -113°C to 260°C)

### HealthCare

Silicone gels by CHT are used to create cushioned external prosthetics, while tacky gels can function as an adhesive for the prosthetics. Because CHT’s silicone gels are very soft and retain their form once cured, they provide comfortable padding for hospital beds, wheelchair pillows, and sole cushioning in footwear.

**Benefits of CHT’s Silicone Technology**

- Pigmentable
- Primerless Adhesion
- Soft, but Resilient
- Remains Tacky Even When Exposed to Moisture
- Low Viscosity for Easy Dispensing

### LED Display

Silicone gels by CHT provide a protective barrier against moisture and environmental contaminants. Materials range from optically clear to lightly tinted grades for contrast enhancement.

**Benefits of CHT’s Silicone Technology**

- Stable in Extreme Temperatures
- Chemical and Flammability Resistance
- Thermally Conductive Grades for Heat Management
- Environmental Protection
- Electronic Sensor Packaging and Protection
- Strong Adhesion to a Wide Variety of Substrates with Use of a Primer

### Special Effects

CHT offers a selection of silicone gels that are tacky by design and can be used to temporarily adhere special effects prosthetics/makeup to skin or props. These robust silicone gels can also function as cushioned external prosthetics placed on the actor or prop.

**Benefits of CHT’s Silicone Technology**

- Pigmentable
- Low Viscosity for Easy Dispensing
- Wide Range of Penetrations
- Removable andReusable
- Remains Tacky Even When Exposed to Moisture

### Customized Packaging Options Available Upon Request

- 55 Gallon Drum Kit
- Half Gallon Pail Kit
- Pint Kit
- Customized Packaging Options Available Upon Request

### CHT’s Product Packaging Options Include:

- 275 Gallon Tote Kit
- 55 Gallon Drum Kit
- Five Gallon Pail Kit
- Half Gallon Pail Kit
- Pint Kit

CTH’s team is focused on building relationships and carefully listening to your requests, questions and feedback. With this approach, our team is then prepared to provide you with optimal silicone solutions that ultimately improve productivity and enhance performance.
CHT has designed a variety of silicone gels for the filtration industry. CHT’s silicone gels are used in the pharmaceutical, nuclear, industrial and automotive markets among others.

Benefits of CHT’s Silicone Technology

- Excellent resistance to certain cleaning chemicals, such as PAO and DOP
- Moisture protection
- Fast room temperature cures - reducing production times
- Withstand extreme temperatures from -55°C to 204°C (Customized temperature ranges are available from -113°C to 240°C)
- Technology available to minimize extractables
- Thixotropic grades available

### Flat Panel Display
CHT offers a series of optically clear silicones to help bond glass and plastics to flat panel and LCD displays.

Benefits of CHT’s Silicone Technology

- UV resistant
- Non-yellowing catalyst systems are available
- Pigmentable to provide contrast enhancement
- Various bonding strengths from removable/reparable to permanent
- Protects components from harsh environmental factors
- Gel interlayer for glare reduction

<table>
<thead>
<tr>
<th>Product</th>
<th>Description / Benefits</th>
<th>Mix Ratio</th>
<th>Color</th>
<th>Mixed Viscosity</th>
<th>Gel Time @ 25°C</th>
<th>Duremeter (Shore 00) / Penetration (depth in mm)</th>
<th>Refractive Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>QGel 300</td>
<td>High Strength Gel</td>
<td>1:1</td>
<td>Transparent</td>
<td>1,500 cps</td>
<td>135 min</td>
<td>7 mm</td>
<td>1.40</td>
</tr>
<tr>
<td>QGel 300Y</td>
<td>High Strength Gel, Tinted Yellow</td>
<td>1:1</td>
<td>Transparent Yellow</td>
<td>1,500 cps</td>
<td>135 min</td>
<td>7 mm</td>
<td>1.40</td>
</tr>
<tr>
<td>QGel 301</td>
<td>High Strength, Inhibition Resistant Gel</td>
<td>1:1</td>
<td>Transparent</td>
<td>1,500 cps</td>
<td>25 min</td>
<td>7 mm</td>
<td>1.40</td>
</tr>
<tr>
<td>QGel 302</td>
<td>Fast Room Temperature Cure</td>
<td>1:1</td>
<td>Transparent</td>
<td>750 cps</td>
<td>30 min</td>
<td>6 mm</td>
<td>1.40</td>
</tr>
<tr>
<td>QGel 303</td>
<td>Fast Cure, General Purpose, Part “A” Tinted Red, Part “B” Tinted Blue</td>
<td>1:1</td>
<td>Transparent Purple</td>
<td>725 cps</td>
<td>9 min</td>
<td>6 mm</td>
<td>1.40</td>
</tr>
<tr>
<td>QGel 310</td>
<td>General Purpose, Room Temperature Cure</td>
<td>1:1</td>
<td>Transparent</td>
<td>1,000 cps</td>
<td>45 min</td>
<td>7 mm</td>
<td>1.40</td>
</tr>
<tr>
<td>QGel 311</td>
<td>Fast Cure, Inhibition Resistant Gel</td>
<td>1:1</td>
<td>Transparent</td>
<td>1,000 cps</td>
<td>3 min</td>
<td>7 mm</td>
<td>1.40</td>
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<tr>
<td>QGel 311UV</td>
<td>Fast Cure, Inhibition Resistant Gel with UV Tracer</td>
<td>1:1</td>
<td>Transparent / UV Blue</td>
<td>1,000 cps</td>
<td>3 min</td>
<td>7 mm</td>
<td>1.40</td>
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<tr>
<td>QGel 312</td>
<td>Designed to Accommodate Additional Filler Loading</td>
<td>10:1</td>
<td>Transparent</td>
<td>1,000 cps</td>
<td>7 hours</td>
<td>3 mm</td>
<td>1.40</td>
</tr>
<tr>
<td>QGel 313</td>
<td>Two Mix Ratios for Different Hardnesses</td>
<td>(10:1) / (20:1)</td>
<td>Transparent</td>
<td>300 cps</td>
<td>&gt; 7 days</td>
<td>50, Shore 00 / 5 mm</td>
<td>1.40</td>
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<tr>
<td>QGel 314</td>
<td>PSA Tacky Material</td>
<td>10:1</td>
<td>Translucent Purple</td>
<td>60,000 cps</td>
<td>2 hours</td>
<td>25, Shore 00</td>
<td>1.40</td>
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<tr>
<td>QGel 315</td>
<td>Extremely Long Work Life</td>
<td>1:1</td>
<td>Transparent</td>
<td>1,000 cps</td>
<td>&gt; 24 hours</td>
<td>7 mm</td>
<td>1.40</td>
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<tr>
<td>QGel 317</td>
<td>Soft, Fast Room Temperature Cure</td>
<td>1:1</td>
<td>Transparent</td>
<td>1,000 cps</td>
<td>7 min</td>
<td>16 mm</td>
<td>1.40</td>
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<tr>
<td>QGel 319</td>
<td>High Strength Gel</td>
<td>10:1</td>
<td>Transparent</td>
<td>2,050 cps</td>
<td>2 hours</td>
<td>70, Shore 00</td>
<td>1.40</td>
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<tr>
<td>QGel 322</td>
<td>Low Viscosity Gel</td>
<td>1:1</td>
<td>Transparent</td>
<td>755 cps</td>
<td>30 min</td>
<td>6 mm</td>
<td>1.40</td>
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<tr>
<td>QGel 322Y</td>
<td>Low Viscosity Gel, Tinted Yellow</td>
<td>1:1</td>
<td>Transparent Yellow</td>
<td>730 cps</td>
<td>30 min</td>
<td>6 mm</td>
<td>1.40</td>
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<tr>
<td>QGel 324</td>
<td>Excellent Self-Healing Properties</td>
<td>1:1</td>
<td>Transparent</td>
<td>3,000 cps</td>
<td>180 min</td>
<td>7 mm</td>
<td>1.40</td>
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<tr>
<td>QGel 326</td>
<td>Long Gel Time</td>
<td>1:1</td>
<td>Transparent</td>
<td>875 cps</td>
<td>2.5 hours</td>
<td>12 mm</td>
<td>1.40</td>
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<tr>
<td>QGel 327</td>
<td>Inhibition Resistant Gel</td>
<td>1:1</td>
<td>Transparent</td>
<td>1,000 cps</td>
<td>30 min</td>
<td>7 mm</td>
<td>1.40</td>
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<tr>
<td>QGel 329</td>
<td>General Purpose Gel</td>
<td>1:1</td>
<td>Transparent</td>
<td>950 cps</td>
<td>120 min</td>
<td>7 mm</td>
<td>1.40</td>
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<tr>
<td>QGel 332</td>
<td>High Resiliency Gel</td>
<td>1:1</td>
<td>Transparent</td>
<td>1,000 cps</td>
<td>30 min</td>
<td>3 mm</td>
<td>1.40</td>
</tr>
<tr>
<td>QGel 333</td>
<td>Thixotropic when Mixed</td>
<td>1:1</td>
<td>Transparent</td>
<td>7,500 cps</td>
<td>20 min</td>
<td>7 mm</td>
<td>1.40</td>
</tr>
<tr>
<td>QGel 390</td>
<td>Low Temperature, High Refractive Index</td>
<td>1:1</td>
<td>Transparent</td>
<td>1,550 cps</td>
<td>45 min</td>
<td>7 mm</td>
<td>1.43</td>
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<tr>
<td>QGel 391</td>
<td>High Refractive Index</td>
<td>1:1</td>
<td>Transparent</td>
<td>450 cps</td>
<td>120 min</td>
<td>4 mm</td>
<td>1.47</td>
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<tr>
<td>QGel 392</td>
<td>High Refractive Index</td>
<td>1:1</td>
<td>Transparent</td>
<td>1,550 cps</td>
<td>120 min</td>
<td>7 mm</td>
<td>1.49</td>
</tr>
<tr>
<td>TufGel 330</td>
<td>Firm Gel</td>
<td>1:1</td>
<td>Transparent</td>
<td>700 cps</td>
<td>70 min</td>
<td>45, Shore 00</td>
<td>1.41</td>
</tr>
<tr>
<td>TufGel 331</td>
<td>Blue, Firm Gel</td>
<td>1:1</td>
<td>Transparent Blue</td>
<td>700 cps</td>
<td>45 min</td>
<td>40, Shore 00</td>
<td>1.41</td>
</tr>
<tr>
<td>TufGel 332</td>
<td>Non-Yellowing Catalyst, Firm Gel</td>
<td>1:1</td>
<td>Transparent</td>
<td>785 cps</td>
<td>5 hours</td>
<td>45, Shore 00</td>
<td>1.41</td>
</tr>
<tr>
<td>TufGel 333</td>
<td>UL 94 HB @ 1.7 and 3.0 (mm)</td>
<td>1:1</td>
<td>Transparent Blue</td>
<td>825 cps</td>
<td>30 min</td>
<td>45, Shore 00</td>
<td>1.41</td>
</tr>
<tr>
<td>TufGel 334</td>
<td>Fast Cure, Room Temperature Self-Bonding</td>
<td>1:1</td>
<td>Black</td>
<td>375 cps</td>
<td>5-8 min</td>
<td>50, Shore 00</td>
<td>1.41</td>
</tr>
<tr>
<td>TufGel 3350</td>
<td>Fast Cure, Room Temperature Self-Bonding</td>
<td>1:1</td>
<td>Transparent Yellow</td>
<td>440 cps</td>
<td>7 min</td>
<td>60, Shore 00</td>
<td>n/a</td>
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<tr>
<td>TufGel 3360</td>
<td>Fast Cure, Self-Bonding with UV Tracer</td>
<td>1:1</td>
<td>Light Blue</td>
<td>425 cps</td>
<td>7 min</td>
<td>65, Shore 00</td>
<td>n/a</td>
</tr>
</tbody>
</table>
To view CHT’s complete product portfolio or to request product samples, please visit www.silicone-experts.cht.com

CHT is committed to providing you with superior service and the highest quality silicone products available. Our certification to the ISO 9001 standard ensures that we are always working towards continual improvement in every way.

We also have a stringent product testing protocol that uses ASTM standard test methods. Based on your specifications, products must meet certain criteria throughout production and prior to its release. A Certificate of Analysis will accompany every shipment you receive.

Take advantage of consulting one on one with our sales and technology team.

CHT demonstrates a distinctive flexibility, whether it’s modifying existing product specifications or developing a new product specifically designed for your unique application.

Our worldwide distributor network provides local inventory, which means reduced transit times and lower shipping costs for you.

Rely on our prompt, product development time.

Our team welcomes your feedback because we are always striving to make innovative improvements.

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CALL US TOLL-FREE TODAY
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