

INDUSTRY
SOLUTIONS.

Material
Solutions.

CHT

SMART CHEMISTRY
WITH CHARACTER.

 **Chemical
Concepts**[™]
Our expertise is your solution.
chemical-concepts.com
800.220.1966
410 Pike Road • Huntingdon Valley, PA 19006

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 many important physical 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.

Benefits of CHT's Silicone Technology

- ▶ Refractive index
- ▶ Useful temperature range
- ▶ Adhesion
- ▶ Cure speed
- ▶ Color / Tint
- ▶ Penetration
- ▶ Viscosity
- ▶ Conductivity

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 expert technologists 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.

AEROSPACE



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

Benefits of CHT's Silicone Technology

- ▶ Moisture protection
- ▶ Excellent shock and vibration resistance
- ▶ Room temperature and heat curing adhesion
- ▶ Packages for multiple substrates
- ▶ Products with low temperature capabilities to -110C
- ▶ Low volatile materials are available, ASTM E-595
- ▶ Optically clear technology available
- ▶ Flame retardant, UL listed grades available (See our UL Rating File Number QMFZ2.E205830)

SILICONE GELS APPLICATIONS

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

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 and reusable
- ▶ Remains tacky even when exposed to moisture

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 products 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 minimize CTE strain
- ▶ Excellent shock and vibration resistance
- ▶ Variety of both room temperature and heat curing materials
- ▶ Flame retardant, UL listed grades available (See our UL Rating File Number QMFZ2.E205830)
- ▶ Adhesion packages are available to obtain primerless adhesion to various substrates
- ▶ Withstand extreme temperatures from -55°C to 204°C (Customized temperature ranges are available from -113°C to 240°C)

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

- ▶ Extreme low and high temperature stability
- ▶ Chemical and flame 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

CHT's product packaging options include:

- ▶ 275 Gallon Tote Kit
- ▶ 55 Gallon Drum Kit
- ▶ Five Gallon Pail Kit
- ▶ Half Gallon Pail Kit
- ▶ Pint Kit
- ▶ Customized packaging options available upon request

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 can be 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 are available (See our UL Rating File Number QMFZ2.E205830)
- ▶ Low modulus materials minimize CTE strain
- ▶ Low viscosity for fast dispensing
- ▶ Self-bonding capabilities

LED LIGHTING



Temperature resistant, optically clear silicones can be applied over surface mount LEDs and are designed to be mixed with either diffusants or whitening agents if required. CHT has a wide variety of potting compounds and sealants used in the LED industry that can bond substrates, protect electronics and provide thermal stability.

Benefits of CHT's Silicone Technology

- ▶ Environmental protection
- ▶ Higher refractive indices to facilitate a brighter and longer lasting light
- ▶ Non-yellowing catalyst systems are available
- ▶ Low viscosity to flow around complex parts and minimize air entrapment
- ▶ Excellent thermal stability
- ▶ Self-bonding grades available
- ▶ UL listed grades available (See our UL Rating File Number QMFZ2.E205830)

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
- ▶ Self-healing properties
- ▶ Withstands thermal cycling
- ▶ Non-slumping, thixotropic grades are available
- ▶ Room temperature primerless adhesion
- ▶ Corrosion resistant
- ▶ Flame retardant, UL listed grades available (See our UL Rating File Number QMFZ2.E205830)



Product	Description / Benefits	Mix Ratio	Color	Mixed Viscosity	Gel Time @ 25°C	Durometer (Shore 00) / Penetration (depth in mm)	Refractive Index
QGel 300	High Strength Gel	1:1	Transparent	1,500 cps	135 min	7 mm	1.40
QGel 300Y	High Strength Gel, Tinted Yellow	1:1	Transparent Yellow	1,500 cps	135 min	7 mm	1.40
QGel 301	High Strength, Inhibition Resistant Gel	1:1	Transparent	1,500 cps	25 min	7 mm	1.40
QGel 302	Fast Room Temperature Cure	1:1	Transparent	750 cps	30 min	6 mm	1.40
QGel 303	Fast Cure, General Purpose, Part "A" Tinted Red, Part "B" Tinted Blue	1:1	Transparent Purple	725 cps	9 min	6 mm	1.40
QGel 310	General Purpose, Room Temperature Cure	1:1	Transparent	1,000 cps	45 min	7 mm	1.40
QGel 311	Fast Cure, Inhibition Resistant Gel	1:1	Transparent	1,000 cps	3 min	7 mm	1.40
QGel 311UV	Fast Cure, Inhibition Resistant Gel with UV Tracer	1:1	Transparent / UV Blue	1,000 cps	3 min	7 mm	1.40
QGel 312	Designed to Accommodate Additional Filler Loading	10:1	Transparent	1,000 cps	7 hours	3 mm	1.40
QGel 313	Two Mix Ratios for Different Hardnesses	(10:1) / (20:1)	Transparent	300 cps	> 7 days	50, Shore 00 / 5 mm	1.40
QGel 314	PSA Tacky Material	10:1	Translucent	60,000 cps	2 hours	25, Shore 00	1.40
QGel 315	Extremely Long Work Life	1:1	Transparent	1,000 cps	> 24 hours	7 mm	1.40
QGel 317	Soft, Fast Room Temperature Cure	1:1	Transparent	1,000 cps	7 min	16 mm	1.40
QGel 319	High Strength Gel	10:1	Transparent	2,050 cps	2 hours	70, Shore 00	1.40
QGel 322	Low Viscosity Gel	1:1	Transparent	755 cps	30 min	6 mm	1.40
QGel 322Y	Low Viscosity Gel, Tinted Yellow	1:1	Transparent Yellow	730 cps	30 min	6 mm	1.40
QGel 324	Excellent Self-Healing Properties	1:1	Transparent	3,000 cps	180 min	7 mm	1.40
QGel 326	Long Gel Time	1:1	Transparent	875 cps	2.5 hours	12 mm	1.40
QGel 327	Inhibition Resistant Gel	1:1	Transparent	1,000 cps	30 min	7 mm	1.40
QGel 329	General Purpose Gel	1:1	Transparent	950 cps	120 min	7 mm	1.40
QGel 342	High Resiliancy Gel	1:1	Transparent	1,000 cps	30 min	3 mm	1.40
QGel 343	Thixotropic when Mixed	1:1	Translucent	7,500 cps	20 min	7 mm	1.40
QGel 900	Low Temperature, High Refractive Index	1:1	Transparent	1,550 cps	45 min	7 mm	1.43
QGel 910	High Refractive Index	1:1	Transparent	450 cps	120 min	4 mm	1.47
QGel 920	High Refractive Index	1:1	Transparent	1,550 cps	120 min	7 mm	1.49
TufGel 330	Firm Gel	1:1	Transparent	700 cps	70 min	45, Shore 00	1.41
TufGel 331	Blue, Firm Gel	1:1	Transparent Blue	700 cps	45 min	40, Shore 00	1.41
TufGel 332	Non-Yellowing Catalyst, Firm Gel	1:1	Transparent	785 cps	5 hours	45, Shore 00	1.41
TufGel 333	UL 94 HB @ 1.7 and 3.0 (mm)	1:1	Transparent Blue	825 cps	30 min	45, Shore 00	1.41
TufGel 336	Fast Cure, Room Temperature Self-Bonding	1:1	Black	375 cps	5-8 min	50, Shore 00	1.41
TufGel 3350	Fast Cure, Room Temperature Self-Bonding	1:1	Transparent Yellow	440 cps	7 min	60, Shore 00	n/a
TufGel 3360	Fast Cure, Self-Bonding with UV Tracer	1:1	Light Blue	425 cps	7 min	65, Shore 00	n/a

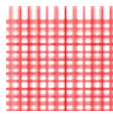
FLAT PANEL DISPLAY



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/repairable to permanent
- ▶ Protects components from harsh environmental factors
- ▶ Gel interlayer for glare reduction



FILTERS

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

QUALITY | SERVICE | INNOVATION

WE TAKE PRIDE IN SERVING YOU

- ▶ 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.

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.



 material@cht.com

 [linkedin.com/showcase/cht-silicone-experts](https://www.linkedin.com/showcase/cht-silicone-experts)

To view CHT's complete product portfolio or to request product samples, please visit www.silicone-experts.cht.com

CALL US TOLL-FREE TODAY

Phone: 1-800-852-3147

CHT
SMART CHEMISTRY
WITH CHARACTER.

www.cht.com