

**INDUSTRY
SOLUTIONS.**

**Material
Solutions.**

CHT
SMART CHEMISTRY
WITH CHARACTER.

MOLDMAKING SILICONE SERIES

DURABLE, RESIN RESISTANT AND DIMENSIONALLY
STABLE SILICONE RUBBER FOR PRODUCTION PARTS

MOLDMAKING APPLICATIONS

Whether you are casting polyurethane foam, polyurethane resin, polyester, gypsum, stones, or low melt alloys like bronze, you can rely on CHT's moldmaking silicones to consistently produce replicas. CHT's moldmaking materials have many key features that all play an important role in the molding and duplicating process including:

- ▶ Low & high viscosities
- ▶ A wide range of durometers
- ▶ Various demold times
- ▶ Translucent grades available that allow pigment addition
- ▶ High temperature resistance materials up to 225°C
- ▶ Low shrinkage materials designed for highly complex and intricate parts
- ▶ Materials for indirect food applications compliant with FDA standards
- ▶ Room temperature and heat accelerated curing capabilities
- ▶ Liquid additives and multiple catalyst options are available to obtain your desired physical properties or cure speeds

CHT's two-part moldmaking compounds are all RoHS compliant and consist of a base and a catalyst/curing agent, and are either an addition (platinum) cure or condensation (tin) cure. Addition curing materials are kit matched and generally have high durometers with good tensile strength, tear strength and elongation properties that all provide dimensional stability. Condensation curing materials vulcanize at room temperature and have multiple catalyst options to alter cure speeds.

There are a number of variables to consider and identify before selecting a moldmaking material, such as: What is your master made of and what type of resin will you use? Which mold type will be most cost efficient for your application? How intricate or complex is the part that you will mold? How many parts will you be able to produce from the mold? Is a quick turn-around time important to your application?

CHT's team focuses on building relationships and takes time in asking you important questions to learn about your project's specific performance objectives. After gaining this insight, our team will be prepared to recommend optimal products or customize a new one to improve productivity – as we have, and continue to do so for customers worldwide.



ARCHITECTURAL

Many different architectural elements can be created or restored by using CHT's silicone to create molds of wood, columns, cornices, pavers, including a wide variety of faux wall surfaces, like stone and brick.



CANDLES & SOAP

CHT has some of the softest and most flexible moldmaking rubber used to make delicate and intricate soap and candle molds. Try QM 107 among others.



DENTAL

QM 1125 is a leader in the dental duplication industry. It is fast curing and comes in a convenient 1:1 mix ratio.



FOOD CONTACT

CHT has an extensive selection of moldmaking silicones that are ideal for indirect food contact. These products meet FDA 21 CFR 177.2600 standard and are flexible, reliable and cost effective.



HEALTH

CHT offers silicones that can feature a realistic look and feel for the manufacture of prosthetics and medical simulation mannequins.



PROTOTYPING

Prior to production, CHT's moldmaking materials enables you to build a physical three-dimensional representation of your new idea. CHT's silicones exhibit excellent mechanical properties, dimensional accuracy, high temperature resistance and a non-stick surface.



SCULPTURES & FIGURINES

CHT's moldmaking silicones allow you to create an exact replica of your original artwork. With multiple catalyst options, the rheology (flow properties) of our moldmaking materials can be easily altered, allowing convenient application to upright figures. Once mixed, our silicones can be brushed, sprayed or poured onto the master model.

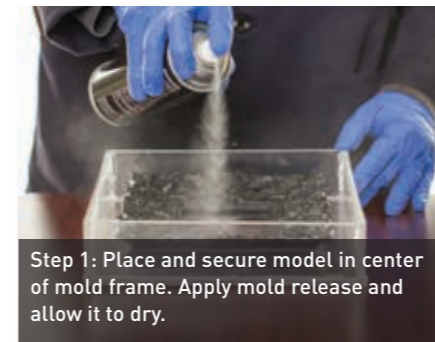


SPECIAL EFFECTS

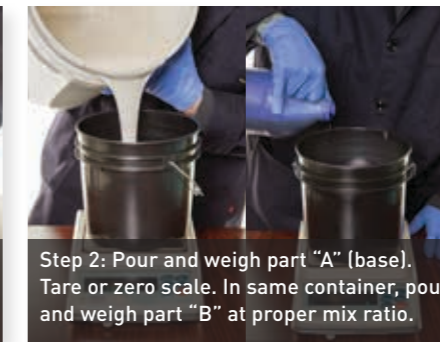
Whether you are creating a life-sized dinosaur or a full body cast, CHT's moldmaking silicones are used in both large scale productions and in hobbyists' projects. Choose from a large selection of easy-to-use products to create props for the motion picture and theme park industries.

CHT'S PRODUCT PACKAGING OPTIONS INCLUDE:

- 275 Gallon Tote Kit
- 55 Gallon Drum Kit
- Five Gallon Pail Kit
- One Gallon Kit
- Quart Kit
- Customized packaging options available upon request



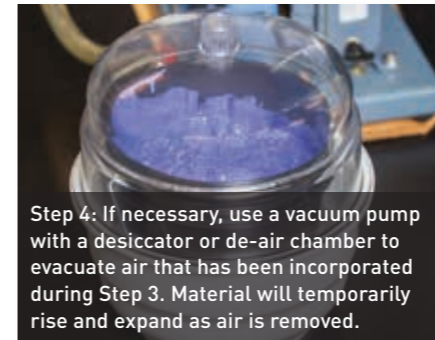
Step 1: Place and secure model in center of mold frame. Apply mold release and allow it to dry.



Step 2: Pour and weigh part "A" (base). Tare or zero scale. In same container, pour and weigh part "B" at proper mix ratio.



Step 3: Stir material until minimal color striations are visible. Slowly mix material to ensure minimal air entrapment.



Step 4: If necessary, use a vacuum pump with a desiccator or de-air chamber to evacuate air that has been incorporated during Step 3. Material will temporarily rise and expand as air is removed.



Step 5: Pour the mixed silicone until reaching top of mold frame, and allow full cure.



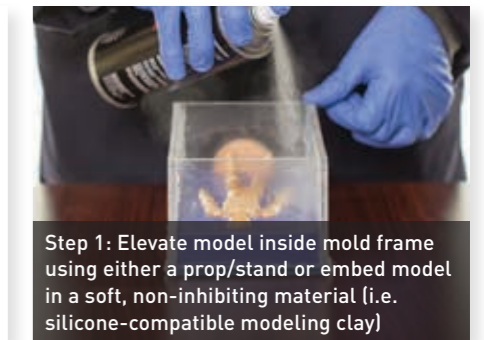
Step 6: Remove all sides of the frame. Gently remove the master model from the mold. Clean the mold as needed.



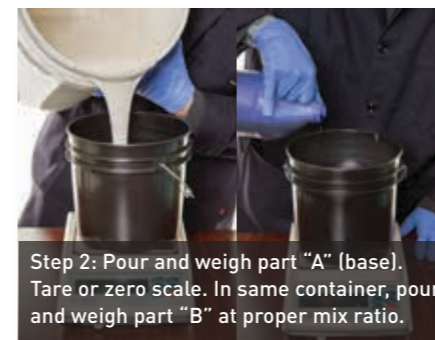
Step 7: Prepare casting resin as specified. Pour a small portion of the casting resin onto the outside of the mold to ensure inhibition does not occur.

One Part Moldmaking

Two Part Moldmaking



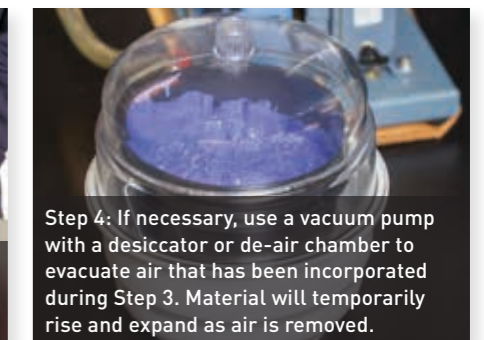
Step 1: Elevate model inside mold frame using either a prop/stand or embed model in a soft, non-inhibiting material (i.e. silicone-compatible modeling clay)



Step 2: Pour and weigh part "A" (base). Tare or zero scale. In same container, pour and weigh part "B" at proper mix ratio.



Step 3: Stir material until minimal color striations are visible. Slowly mix material to ensure minimal air entrapment.



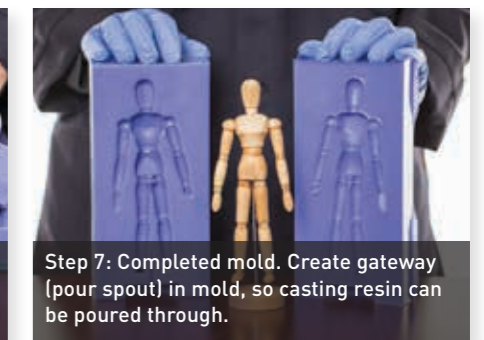
Step 4: If necessary, use a vacuum pump with a desiccator or de-air chamber to evacuate air that has been incorporated during Step 3. Material will temporarily rise and expand as air is removed.



Step 5: Apply mold release to the exposed area of the cured silicone and inside the mold frame. Pour the mixed/de-aired silicone until reaching top of mold frame. Allow full cure.



Step 6: Remove all sides of the frame. Gently separate the two halves. Create a gateway (pour spout).



Step 7: Completed mold. Create gateway (pour spout) in mold, so casting resin can be poured through.

| Product | Description / Benefits | Mix Ratio | Cure Type ¹ | Catalyzed Color ² | Mixed Viscosity ² | Durometer (Shore A) ² | Work Life @ 25°C ² | Demold Time ² | Elongation ² | Linear Shrinkage ² | Tensile Strength ² | Tear Strength |
|--------------|--|-----------|------------------------|------------------------------|------------------------------|----------------------------------|-------------------------------|--------------------------|-------------------------|-------------------------------|-------------------------------|---------------|
| QM 100 | Fake Glass/Ice; When Punctured, Shatters Like Glass After Cured | 10:1 | Condensation | Clear | 550 cps | 30 | 24 min | 4 - 6 hours | N/A | < 0.3 % | N/A | N/A |
| QM 107* | Low Viscosity, Low Durometer, Soft and Pliable | 10:1 | Condensation | Light Purple | 7,500 cps | 7 | 25 min | 12 - 16 hours | 700% | < 0.3 % | 300 psi | 90 ppi |
| QM 113* | Low Viscosity, Low Durometer, Soft and Pliable | 10:1 | Condensation | Light Purple | 12,000 cps | 13 | 25 min | 12 - 16 hours | 500% | < 0.3 % | 400 psi | 110 ppi |
| QM 118 | Great Flowability, Medium Durometer, Great Dimensional Stability | 10:1 | Condensation | Light Purple | 13,500 cps | 18 | 25 min | 12 - 16 hours | 500% | < 0.3 % | 420 psi | 115 ppi |
| QM 122* | Great Flowability, Medium Durometer, Great Dimensional Stability | 10:1 | Condensation | Light Purple | 15,000 cps | 22 | 35 min | 12 - 16 hours | 300% | < 0.3 % | 400 psi | 115 ppi |
| QM 128* | Great Flowability, Medium Durometer, Great Dimensional Stability | 10:1 | Condensation | Light Purple | 30,000 cps | 28 | 35 min | 12 - 16 hours | 400% | < 0.3 % | 500 psi | 140 ppi |
| QM 130T | Great for Prototyping, Alternate Catalyst Available for Spray Applications | 10:1 | Condensation | Translucent | 50,000 cps | 30 | 20 min | 12 - 16 hours | 450% | < 0.3 % | 500 psi | 140 ppi |
| QM 132T | Pigmentable, Medium Durometer, High Tear Strength | 10:1 | Condensation | Translucent Purple | 50,000 cps | 30 | 20 min | 12 - 16 hours | 450% | < 0.3% | 500 psi | 140 ppi |
| QM 135 | Medium Durometer, High Tear Strength | 10:1 | Condensation | Light Purple | 45,000 cps | 35 | 40 min | 12 - 16 hours | 400% | < 0.3% | 500 psi | 150 ppi |
| QM 140* | Medium Durometer, High Tear Strength | 10:1 | Condensation | Light Purple | 37,000 cps | 40 | 45 min | 12 - 16 hours | 300% | < 0.3% | 650 psi | 160 ppi |
| QM 2125 | Molds for GFRC Pre-Cast, Multiple Catalyst Speeds Available | 10:1 | Condensation | Light Purple | 28,000 cps | 23 | 60 min | 8 - 10 hours | 500% | < 0.25% | 500 psi | 130 ppi |
| QM 2128 | Molds for GFRC Pre-Cast, Multiple Catalyst Speeds Available | 10:1 | Condensation | Light Purple | 35,000 cps | 28 | 60 min | 8 - 10 hours | 500% | < 0.25% | 600 psi | 160 ppi |
| QM 2325 | Dimensional Stability with Low Modulus | 20:1 | Condensation | Light Green | 28,000 cps | 25 | 60 min | 16 - 24 hours | 400% | < 0.30% | 500 psi | 140 ppi |
| QM Skin 30* | Skin Replication Applications, Pigmentable | 10:1 | Condensation | Translucent | 30,000 cps | 5 | 42 min | 16 - 24 hours | 1,000% | < 0.30% | 350 psi | 95 ppi |
| Stretch FX | Skin Replication Applications, Pigmentable | 10:1 | Addition | Translucent | 10,000 cps | 22 | 32 min | 6 - 8 hours | 1,200% | < 0.1% | 500 psi | 100 ppi |
| QM 226 | Room Temperature, Low Shrinkage | 10:1 | Addition | Red | 17,000 cps | 26 | 30 min | 6 - 8 hours | 650% | < 0.1% | 650 psi | 90 ppi |
| QM 230 | Low Durometer, Room Temperature, FDA Compliant | 10:1 | Addition | Blue | 10,000 cps | 33 | 30 min | 6 - 8 hours | 500% | < 0.1% | 430 psi | 65 ppi |
| QM 230F | Fast Room Temperature, Low Shrinkage, FDA Compliant | 10:1 | Addition | Blue | 10,000 cps | 33 | 12 min | 4 - 6 hours | 500% | < 0.1% | 430 psi | 65 ppi |
| QM 231 | Pigmentable, Low Durometer, Room Temperature | 10:1 | Addition | Translucent | 50,000 cps | 30 | 300 min | 18 - 24 hours | 510% | < 0.1% | 700 psi | 90 ppi |
| QM 232 | Room Temperature, Low Shrinkage, FDA Compliant | 10:1 | Addition | Beige | 10,000 cps | 30 | 35 min | 6 - 8 hours | 710% | < 0.1% | 570 psi | 75 ppi |
| QM 237 | Room Temperature, Low Shrinkage | 10:1 | Addition | Blue | 10,000 cps | 37 | 35 min | 6 - 8 hours | 540% | < 0.1% | 525 psi | 60 ppi |
| QM 240T | Pigmentable, Excellent Mechanical Properties Medium Durometer | 10:1 | Addition | Translucent | 60,000 cps | 40 | 45 min | 18 - 24 hours | 350% | < 0.1% | 900 psi | 120 ppi |
| QM 245 | Medium Durometer, Room Temperature, FDA Compliant | 10:1 | Addition | Red | 30,000 cps | 45 | 42 min | 6 - 8 hours | 400% | < 0.1% | 600 psi | 80 ppi |
| QM 247 | Room Temperature, Low Shrinkage, FDA Compliant | 10:1 | Addition | Beige | 30,000 cps | 45 | 46 min | 6 - 8 hours | 400% | < 0.1% | 600 psi | 80 ppi |
| QM 254 | Low Viscosity, Excellent Thermal Stability (High Useful Temperature Range) | 10:1 | Addition | Black | 35,000 cps | 60 | 60 min | 8 - 12 hours | 140% | < 0.1% | 1,000 psi | 90 ppi |
| QM 255 | High Durometer, Room Temperature, Low Shrinkage | 10:1 | Addition | Gray | 35,000 cps | 55 | 20 min | 6 - 8 hours | 400% | < 0.1% | 450 psi | 80 ppi |
| QM 258 | Great Mechanical Stability for Large Molds | 10:1 | Addition | Light Green | 100,000 cps | 64 | 60 min | 12 - 18 hours | 200% | < 0.1% | 900 psi | 110 ppi |
| QM 260 | Great Mechanical Stability, Casting Resin Resistance, FDA Compliant | 10:1 | Addition | Light Blue | 70,000 cps | 60 | 60 min | 8 - 12 hours | 190% | < 0.1% | 850 psi | 105 ppi |
| QM 261 | Excellent Physical Properties and Resin Resistance | 10:1 | Addition | Light Blue | 90,000 cps | 62 | 160 min | 12 - 18 hours | 315% | < 0.1% | 815 psi | 90 ppi |
| QM 262 | Low Viscosity, Great Mechanical Stability, FDA Compliant | 10:1 | Addition | Blue | 35,000 cps | 60 | 60 min | 8 - 12 hours | 150% | < 0.1% | 1,000 psi | 90 ppi |
| QM 262F | Low Viscosity, Fast Cure | 10:1 | Addition | Light Blue | 35,000 cps | 60 | 30 min | 3 - 5 hours | 140% | < 0.1% | 1,000 psi | 90 ppi |
| QM 263 | Inhibition Resistant, Great Mechanical Stability | 10:1 | Addition | Light Blue | 60,000 cps | 66 | 65 min | 8 - 12 hours | 180% | < 0.1% | 900 psi | 110 ppi |
| QM 264 | Great Mechanical Stability, FDA Compliant | 10:1 | Addition | Light Blue | 110,000 cps | 60 | 75 min | 12 - 18 hours | 240% | < 0.1% | 800 psi | 120 ppi |
| QM 264HT | High Useful Temperature Range | 10:1 | Addition | Dark Gray | 110,000 cps | 53 | 90 min | 18 hours | 220% | < 0.1% | 830 psi | 116 ppi |
| QM 265 | High Durometer, Great Dimensional Stability | 10:1 | Addition | Beige | 120,000 cps | 60 | 120 min | 12 - 18 hours | 240% | < 0.1% | 800 psi | 120 ppi |
| QM 270 | High Durometer, Resin Resistant, Great Dimensional Stability | 10:1 | Addition | Beige | 50,000 cps | 70 ³ | 70 min | 8 - 12 hours | 110% | < 0.1% | 1,000 psi | 100 ppi |
| QM 270 Green | High Durometer, Resin Resistant, Great Dimensional Stability | 10:1 | Addition | Light Green | 50,000 cps | 70 ³ | 55 min | 8 - 12 hours | 110% | < 0.1% | 1,000 psi | 100 ppi |
| QM 280 | High Durometer, Resin Resistant, Great Dimensional Stability | 10:1 | Addition | Beige | 90,000 cps | 80 ³ | 60 min | 8 - 12 hours | 75% | < 0.1% | 1,100 psi | 75 ppi |
| QM 1125 | Extremely Low Viscosity, Fast Room Temperature Cure | 1:1 | Addition | Light Blue | 3,500 cps | 26 | 3.5 min (Snap Time) | 10 min | 225% | < 0.1% | 275 psi | 15 ppi |

*Complies with FDA indirect food contact regulation CFR 177.2600, when used with QM Cat Clear FG.

1. Condensation cures are generally catalyzed by Tin. Addition cures are catalyzed by Platinum.

2. Typical properties.

3. Heat is required to achieve maximum durometer.

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.cht-silicones.com

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