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 viscoscities
- A wide range of durometers
- Various demold times
- Translucent grades available that allow pigment addition
- High tempurature 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 tempurature 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

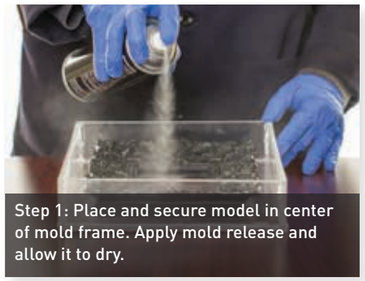
CHT's moldmaking silicones allow you to create an exact replica of your original artwork. With multiple catalyst options, the rheology (flow properties) of our moldmaking materials can be easily altered, allowing convenient application to upright figures. Once mixed, our silicones can be brushed, sprayed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

SPECIAL EFFECTS

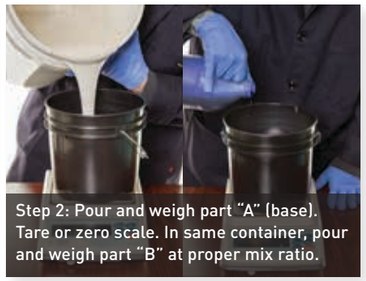
Whether you are creating a life-sized dinosaur or a full body cast, CHT's moldmaking silicones are used in both large scale productions and in hobbyists' projects. Choose from a large selection of easy-to-use products to create props for the motion picture and theme park industries.

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

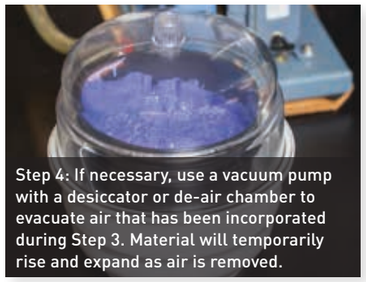


Step 1: Place and secure model in center of mold frame. Apply mold release and allow it to dry.



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

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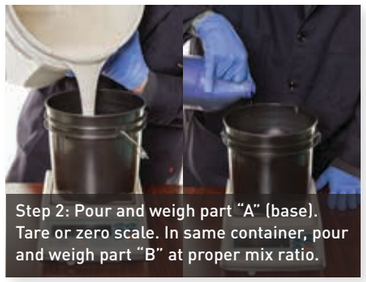
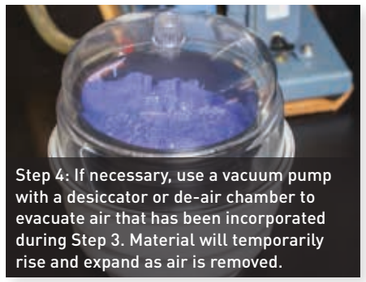
Two Part Moldmaking

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)

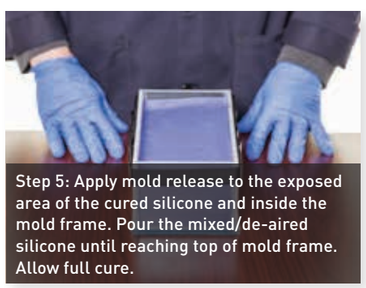


Step 2: Pour and weigh part "A" (base). Tare or zero scale. In same container, pour and weigh part "B" at proper mix ratio.

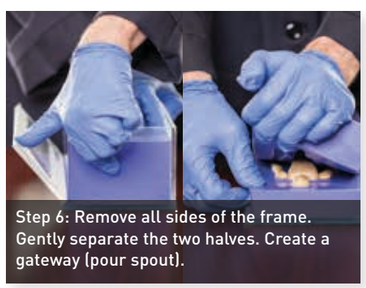
Step 3: Stir material until minimal color striations are visible. Slowly mix material to ensure minimal air entrapment.



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 2223	Low Viscosity, Great for Polyurethane	10:1	Condensation	Light Purple	32,000 cps	23	60 min	8 - 10 hours	350%	< 0.25%	400 psi	30 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

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

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