The art and science of lost wax casting.

Cast with Kerr™
Kerr Casting Investments

Don’t waste valuable time polishing rough finishes or recasting. Kerr Casting Investments are manufactured to exacting standards. With a tradition of over 100 years, Kerr is committed to meeting the demands of today’s casting needs.

Kerr’s renowned product, Satin Cast, is recognized by the world’s finest jewelers as the investment that creates the finest results. Eliminating bubbles, inclusions and fins, Satin Cast is a dependable investment that delivers superior quality castings every time.
## Research
Kerr’s Investment products offer application specific formulations utilizing only the highest quality raw materials, to deliver a superior level of strength and accuracy. Decades of research and quality control has produced materials that deliver consistent results to meet the demands of today’s changing industry.

## Casting Investment Application Chart

<table>
<thead>
<tr>
<th>Product</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>KerrCast 2000</td>
<td>Gold and silver.</td>
</tr>
<tr>
<td>Satin Cast 20</td>
<td>Highest quality gold and silver.</td>
</tr>
<tr>
<td>Satin Cast Diamante</td>
<td>Highest quality stone in place.</td>
</tr>
<tr>
<td>Satin Cast Xtreme</td>
<td>Highest quality white gold.</td>
</tr>
<tr>
<td>Supervest 20</td>
<td>Gold and silver, large items.</td>
</tr>
<tr>
<td>Platinite</td>
<td>Platinum and stainless steel.</td>
</tr>
<tr>
<td>G-400</td>
<td>Aluminum.</td>
</tr>
</tbody>
</table>

## Ordering

- 07960 Satin Cast 20, 45 kg
- 31009 Satin Cast 20, 15 kg
- 31723 Satin Cast 20, 2 kg (6pk)
- 31312 Satin Cast Diamante, 45 kg
- 25219 Satin Cast Xtreme, 45 kg
- 27746 KerrCast 2000, 45 kg
- 14169 Supervest 20, 45 kg
- 27778 Platinite, 36 kg
- 20743 G-400, 45 kg

Satin Cast 20 is available in easy-to-handle 15kg / 33lb cartons.
Accu®Flakes™, Accu®Beads™

Designed for platinum, gold, silver as well as industrial and dental alloys, AccuFlakes injection wax has set the standard in precision casting for years. With the lowest ash content available (0.003%), AccuFlakes and AccuBeads guarantee the cleanest burnout possible. Available in 8 application-specific colors in quick-melting Flake or Bead form.
Chart

Application

Ordering

AccuFlakes, 23 kg
13360 Aqua Green
14079 Rub Red
14293 Turquoise Blue
18428 NYC Pink
23020 Flex Plast Blue
16181 Tuffy Green
12138 Super Pink
32456 AccuCarve Purple

AccuBeads, 23 kg
33497 Aqua Green
33498 Ruby Red
33499 Turquoise Blue
33500 NYC Pink
333501 Flex Plast Blue
33502 Tuffy Green
33503 Super Pink
33504 AccuCarve Purple
Accu®Carve™ Carving Waxes

Designed for discriminating wax designer, AccuCarve precision carving waxes are specially formulated for hand carving as well as machining. They resist clogging of cutting tools and files.

Available in 3 degrees of hardness.
- **Green** - Hardest
- **Purple** - Medium hardness
- **Blue** - Regular (most flexible)

**Suggested Burnout**

Preheat the furnace to 300°F. Place the flask in furnace on a wax burnout tray, and hold temperature to 450°F for one hour. Check to ensure the wax has drained into the tray. Remove the wax tray leaving the flask in the furnace to continue with normal burnout cycle.
3 Piece Bar Kit, 1/2 lb
Kit with 3 wax bars measuring
1-7/8” x 1-1/8” x 3-1/8”
34897 Green
34898 Purple
34899 Blue

Block, 1/2 lb
Wax block measuring
1-7/16” x 3-1/8” x 3-3/8”
34885 Green
34886 Purple
34887 Blue

Block, 1 lb
Wax block measuring
1-7/16” x 3-1/8” x 6-1/2”
34888 Green
34889 Purple
34890 Blue

Slices Asst., 1/2 lb
Assorted slices measuring
1-7/16” x 3-1/8” with
thicknesses from 1/8” to 1/2”
34894 Green
34895 Purple
34896 Blue

Slices Asst., 1 lb
Assorted slices measuring
1-7/16” x 3-1/8” with
thicknesses from 1/8” to 1”
34891 Green
34892 Purple
34893 Blue
Kerr has been a manufacturer of precision waxes for over 50 years, providing consistent quality, application specific waxes for today’s critical casting needs.

**Sticky**
A hard, fast setting wax. Repairs wax patterns and welds waxes together. Melts at 73°C/163°F.
- 00623 15 Sticks
- 00625 120 Sticks

**Boxing Strips**
A tacky wax that results in perfect adhesion without the application of heat. Melts at 80°C/176°F.
- 00609 Strips, box/35

**Boxing Sticks**
A tacky wax that results in perfect adhesion without the application of heat. Melts at 80°C/176°F.
- 00608 Sticks, box/42

**Round Wire Spool**
Easy to form wax wire used for producing various bars, sprues and prong settings.

<table>
<thead>
<tr>
<th>Diameter (ga)</th>
<th>11013</th>
<th>11014</th>
<th>11015</th>
<th>11016</th>
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<tbody>
<tr>
<td>6</td>
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<td>16</td>
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</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Perfect Purple
A unique inlay casting wax formulated especially for wax pattern build-ups requiring hard smooth surfaces in an easy-to-use wax. Melts at 73°C/163°F.
11493 1 oz bar

Blue Inlay
A superior build-up wax for making patterns. Melts at 73°C/163°F.
00474 Regular, 15 Sticks
00475 Regular, 120 Stick
00476 Hard, 15 Sticks
00478 Hard, 120 Sticks

Green Inlay
A superior build-up wax for making patterns. Melts at 73°C/163°F.
00480 Hard, 120 Sticks

Ivory Inlay
A superior build-up wax for making patterns. Melts at 73°C/163°F.
00481 Regular, 15 Sticks

Disclosing
A creamy wax used to repair wax pattern defects. Applies easy to finger or tool.
35118 Ivory, 57 g

Utility Rod White
Tacky at room temperature, once applied it will adhere without heat.
09731 White, Round, 1 lb
09732 White, Square, 1 lb

Utility Rod Red
Tacky at room temperature, once applied it will adhere without heat.
09733 Red, Round, 1 lb

Utility Sheet Red
Tacky at room temperature, once applied it will adhere without heat.
00627 Red, Sheet, 1/2 lb
**Laboratory Solutions**
A comprehensive line of application specific Separators, Surfactants, Die Lubricants and Solvents designed for your most crucial applications. Proven quality formulas that have been industry standards for over 30 years. Available in easy to use 8 oz spray bottles, and larger 32 oz refills.

**Debubblizer**
A surface tension reducing agent that allows investment to flow uniformly to all portions of the wax pattern. For use when hand mixing.
- 8 oz Spray
- 32 oz Refill

**Super-Sep**
An alcohol-based die separating fluid that dries on contact. Plaster, stone or investment can be poured against it immediately.
- 8 oz Spray
- 32 oz Refill

**Vacufilm**
A surface tension reducing agent developed specifically for investing under vacuum. Eliminating bubbles on the casting.
- 8 oz Spray
- 32 oz Refill

**Microfilm**
A non-oily, water-soluble die lubricant that allows a wax pattern to be removed without distortion. Allows for quick and clean separation.
- 8 oz Spray
- 32 oz Refill

**Laboratory Solitine**
A solvent designed for cleaning and finishing wax patterns to a smooth surface. Also removes wax from wax injectors, wax pots and other tools.
- 4 oz
- 8 oz Spray
Two Part Wax Carvers
Innovative wax sculpturing instruments that are customize able by connecting two halves to create the ideal instrument for your particular need. Each half includes a connector screw. Instruments feature soft hexagonal silicone grips, and offer the option of Stainless Steel or Titanium Nitride coated blades for added strength to withstand higher temperatures.

Set of 3 Waxing Instruments
Commonly used set, contains: Large Scoop, 1/2 hollenback Reg., Small Scoop, Small Cleoid, Large Discoid, Small Discoid.
014-965 Titanium Nitride
014-935 Stainless Steel
Ultra-Waxer 2
The ultimate electronic waxer just got better, with dual spatulas for increased productivity, convenient tip holder for convenience and organization, and easy to use menu functions, such as programmable presets and quick heat function. Includes 2 Ultra-Spatulas and 2 Tips (Small PKT # 35167 and Large PKT #35168). Dual Voltage 100/240 Vac. Item 34844

Ultra-Spatula and Tips
The Ultra-Waxer 2 still features an all aluminum, light weight Spatula, with interchangeable heating tips. The Ultra-Tips are color coded for quick identification, foam gripped for ultimate comfort, and the ability to change the tip while still hot.

35167 Small PKT, Blue
35168 Large PKT, Teal
35169 Beavertail, Purple
35170 Small #7, Grey
35171 Large #7, Green
35172 Needle, Red
35173 1/2 Hollenback, Black
35174 Small Denture, Pink
35175 Large Denture, Orange
35176 Denture Spoon, Yellow
35177 Ultra-Spatula, Cord/Handle
MasterTouch
A versatile wax pen offering excellent wax control in pattern build-up and spruing. Exclusive feature offers instant tip heating and cooling when used with the optional foot control. Includes handpiece, foot control, and 2 tips (21878 and 21887). Dual voltage unit.
22129 Master Touch Kit
21871 Cord/Handle

MasterTouch Tips
Tips feature Nichrome wire tips with immediate heating and cooling. Tips have snap-n design that allows for easy and safe removal.
21874 20 ga, Long Bent
21876 20 ga, Bent
21877 22 ga, Bent
28788 24 ga, Bent
21879 28 ga, Bent
21887 20 ga, Rolled Flat Spatula
21888 22 ga, Rolled Flat Spatula
25780 22 ga, Pointed

Smoothy
The Smoothy produces a flameless jet stream of heated air and is ideal for the final stages of wax pattern sculpturing. Only 15 cm long, the Smoothy is held like a pencil and the hot air jet is passed over the surfaces of wax patterns to produce smooth, scratch free contours. The Smoothy can also be used as a mini-torch producing pencil point flame with temperatures up to 2300°F (1260°C), suitable for soldering precious metals, adding contacts and minor casting repairs. Operates on standard butane fuel and is UL registered. Supplied with one Crown and Bridge Finishing tip. Item 013-950
Clay Crucibles
Quality made, industry standard clay crucibles for all of your casting needs.
- 00027 (1 oz) 2 pk
- 00028 (2.5 oz)
- 12194 (2.5 oz) Quartz
- 09508 (7 oz)
- 15027 (12 oz)
- 11605 (20 oz)

Zircon Alumina Crucibles
Non contaminating, slotted crucibles for use with all alloys. Flat trough easily holds 30 dwt. of alloy. Color coded for use with specific metals to prevent cross contamination.
- 010-101 Yellow
- 010-103 Pink
- 010-105 Blue
- 010-001 White

Furnace Markers
Self sharpening, high temperature ferrous markers for casting molds. Will not burn away during burnout.
- 007-935 Yellow, marks flask
- 007-936 Brown, marks investment

Centrifico
The Kerr Centrifico is a well made, precision casting machine that has been the industry standard for decades. It comes complete with accessories to cast all rings up to 3-1/2” diameter by 2-5/8” high, and features a Cast-R-Knob for easy and safe winding of the arm, heavy duty spring, and heavy duty construction.
- 00009 Centrifico Casting Machine
- 33703 Cast-R-Knob Spin Knob
- 15550 Casting Well
**Touchsteam**

Portable yet a workhorse, the Touchsteam Portable Steamer is perfect for any size lab for the elimination of film residue from soaps and ultrasonic cleaners. Also ideal for cleaning and neutralizing metal frameworks prior to porcelain application, removing pencil marks and polishing compound from models and dies, as well as cleaning porcelain before glazing. Heavy-duty stainless steel construction with a one gallon tank, and a cool-grip handpiece with interchangeable nozzles. It features a unique self-regulating pressure cap, and requires no plumbing. Footprint dimensions are 9” x 12”, and weights less than 30 lbs when full.

An innovative Catch Tray system is available separately, allowing the user to control the spray and collect excess water in a connected reservoir. This allows even more portability - as it does not need to be placed near a sink.

**33405 Touchsteam 110V**  
**33406 Touchsteam 230V**  
**33473 Catch Tray**

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**Stainless Steel Flasks**
- **00016** 1C, 1-1/4” Dia.
- **00018** 2C, 1-3/4” Dia.
- **32970** 3C, 2-1/2” Dia.
- **00020** 4C, 3-3/8” Dia.

**Rubber Sprue Bases**
- **32401** T1, 1-1/4” Dia.
- **13989** T2, 1-3/4” Dia.
- **32969** T3, 2-1/2” Dia.
- **13247** T4, 3-3/8” Dia.
Electro-Melt™

Electro-Melts are a line of compact electric furnaces for melting metals. They are designed to be hand-held for easy pouring of the metal directly from the furnace. This makes them ideal for use in casting, reclaiming, alloying and refining metals.

Electro-Melts are automatic and feature electronic controllers for extremely precise melting of metal, including high-karat gold. The electronic feature regulates the temperature by providing full power input to the furnace until a selected temperature is attained, and will hold the temperature to a +/- 5°F/3°C. Maximum temperature 1120°C/2050°F.

Standard Electro-Melt (1 kg)

Melting Capacity:
Gold - 930 g / 30 Troy oz
Silver - 775 g / 25 Troy oz
21 minutes to 982°C/1800°F

31809 120V
31808 230V
Electro-Melts are supplied with a graphite stirring rod and a graphite crucible which provides a reducing atmosphere during melting.

**Maxi Electro-Melt (3 kg)**

Melting Capacity:
- Gold - 3.1 kg / 100 Troy oz
- Silver - 2.6 kg / 83 Troy oz
- 31 minutes to 982°C/1800°F

Super Flux
A special jewelers compound for fluxing precious metals when torch melting or furnace melting. 8 oz / 226 g jar. 12067

Graphite Crucibles
Designed for Kerr Electro-Melts, these graphite crucibles provide maximum resistance to oxidation while metal is being melted.
- 29478 30 oz / 1 kg (Standard)
- 29479 100 oz / 3 kg (Maxi)
Investment Mixing Instructions for Satin Cast Series, KerrCast 2000 and Supervest 20

1. Weigh investment.
2. Measure water.
3. Add investment to water.
4. Mix 3 to 3-1/2 minutes.
5. Vacuum 20 seconds after boil.
6. Pour into flask.
7. Vacuum up to 90 seconds.
8. Let flasks sit still for 2 hours.
9. Preheat furnace 300°F / 149°C (for multiple flasks do not preheat)
10. Remove sprue base.
11. Load into furnace.
12. Follow appropriate burnout cycle.
## Investment Troubleshooting

<table>
<thead>
<tr>
<th>Condition</th>
<th>Causes / Corrections</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Fins” or flash on casting</td>
<td>Incorrect water/powder ratio causing weak investment mold, investment improperly stored, investment extended past work time, flasks disturbed too soon, flasks heated too rapidly</td>
</tr>
<tr>
<td>(added thin metal extensions)</td>
<td></td>
</tr>
<tr>
<td>“Non-fills”</td>
<td>Pattern improperly sprued (too thin or too few), incomplete wax burnout, mold too cool when cast, metal too cool when cast, insufficient metal by weight</td>
</tr>
<tr>
<td>(incomplete castings)</td>
<td></td>
</tr>
<tr>
<td>Porous castings</td>
<td>Pattern improperly sprued, incomplete wax burnout, metal overheated, mold too hot, too much “old” metal (never use more than 50%), metal insufficiently fluxed, too much flux added to metal</td>
</tr>
<tr>
<td>(fine cavities in metal)</td>
<td></td>
</tr>
<tr>
<td>Foreign particle inclusions</td>
<td>Sharp corners and bends in sprue system, flask placed in furnace too soon, flask heated too fast</td>
</tr>
<tr>
<td>Spauling</td>
<td>Sharp corners and bends in sprue system, flask placed in furnace too soon, flask heated too fast, investment handled past work time</td>
</tr>
<tr>
<td>(portion of investment in mold)</td>
<td></td>
</tr>
<tr>
<td>Bubbles / Nodules</td>
<td>Wax patterns not painted with wetting agent, slurry not sufficiently mixed, vacuum in need of pump oil</td>
</tr>
<tr>
<td>Rough Surface</td>
<td>Roughness on wax pattern, pattern improperly sprued, incorrect water/powder ratio</td>
</tr>
<tr>
<td>Watermarks (grainy surface)</td>
<td>Investing too rapidly, incorrect water/powder ratio, investment handled past work time</td>
</tr>
</tbody>
</table>
Investment Recommended Water / Powder Ratios

To determine the number of pounds of investment needed to fill any particular flask, divide the cubic inch content of the flask by 20. (1 lb = 454 grams).

To determine flask content in cubic inches:

**Round Flask:**
0.7854 x dia.\(^2\) x height

**Square Flask:**
width x length x height

<table>
<thead>
<tr>
<th>Weight / lbs.</th>
<th>grams</th>
<th>Water av. oz</th>
<th>ml</th>
<th>Yields cubic inch</th>
<th>Yields cubic cent.</th>
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<td>10.5</td>
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</table>
| 38 ml water to 100 g powder

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<th>Yields cubic inch</th>
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<td>3.2</td>
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**Regular Castings**
Ladies Rings, Pendants, Filigree & Intricate Wax Patterns
40 ml water to 100 g powder
## Investment Powder & Water Requirements for Flask Sizes

**Top Figure - Investment Powder (oz), Bottom Figure - Water (ml)**

### Regular Castings

Ladies Rings, Pendants, Filigree & Intricate Wax Patterns

40 ml water to 100 g powder

<table>
<thead>
<tr>
<th>Flask Diameter</th>
<th>Height</th>
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<th>3&quot;</th>
<th>3.5&quot;</th>
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<th>3.5&quot;</th>
<th>4&quot;</th>
<th>5&quot;</th>
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<tbody>
<tr>
<td>2&quot;</td>
<td>5 oz</td>
<td>57 ml</td>
<td>6 oz</td>
<td>68 ml</td>
<td>7.5 oz</td>
<td>85 ml</td>
<td>9 oz</td>
<td>102 ml</td>
<td>10 oz</td>
<td>114 ml</td>
<td>5 oz</td>
<td>53.9 ml</td>
<td>6 oz</td>
<td>64.6 ml</td>
<td>7.5 oz</td>
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<tr>
<td>2.5&quot;</td>
<td>8 oz</td>
<td>91 ml</td>
<td>10 oz</td>
<td>114 ml</td>
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<td>136 ml</td>
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<td>16 oz</td>
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<td>20 oz</td>
<td>228 ml</td>
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<tr>
<td>3&quot;</td>
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<td>15 oz</td>
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<td>240 ml</td>
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<td>324 ml</td>
<td>30 oz</td>
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<td>32 oz</td>
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<tr>
<td>3.5&quot;</td>
<td>1 lb</td>
<td>182 ml</td>
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</tr>
</tbody>
</table>
Recommended Work Time - In Minutes

**Conventional Mixing**

|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Add powder to water and mix | Vacuum mixing bowl | Pour into flask | Vacuum flask | Top off flask | Setting time | Gloss off |

**Vacuum Mixing**

<p>| | | | | | | | | | |</p>
<table>
<thead>
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</thead>
<tbody>
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<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Add powder to water and mix</td>
<td>Fill the flask</td>
<td>Setting time</td>
<td>Gloss off</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Work Time**: Work time is the time that has elapsed between adding the powder to the water, and when the investment thickens.

**Water Temperature**: Water should be 70°F / 21°C to 75°F / 24°C. Colder water extends work time, warmer water shortens work time.
**Recommended Burnout Cycles**

**Casting Temperatures**

Ladies Rings, lacy or intricate designs
900°F - 1000°F (482°C - 538°C)

Gents Rings, heavier designs
700°F - 900°F (371°C - 482°C)

During the last 1 to 2 hours of burnout, the temperature must be adjusted so that the flasks are at correct temperature for casting.

**5 Hour Cycle**
2 - 1/2" x 2-1/2"
(63 x 63 mm)

**8 Hour Cycle**
3-1/2" x 4"
(89 x 100 mm)

**12 Hour Cycle**
4" x 8"
(100 x 200 mm)

**800°F/427°C**
5 Hour - 1 hr
8 Hour - 2 hr
12 Hour - 2 hr

**Temperature Reduction**

**Complete Elimination**

**Trapped Wax Elimination**

**Thermal Expansion of Mold**

**Note**: Graph is meant as a guide only, adjustments should be made as necessary. 5, 8 and 12 Hour Cycles represent hold times only, and do not include ramp time. Recommended ramp time of approximately 9°F / 5°C per minute.
Injection Wax Instructions for AccuBeads and AccuFlakes

1. Fill wax pot and heat to specific injection temperature. It is important not to overheat the wax.

2. Spray both sides of the rubber mold with Kerr Microfilm or Silicone Mold Release spray. Open mold fully by bending it backwards in order to reach all areas with the spray. It is not necessary to spray each time before injecting the mold.

3. Adjust air pressure on wax injector to between 3 and 10 pounds. Higher pressure can be used if necessary. However, for best results keep pressure under 15 pounds.

4. Put rubber mold into clamp or hold between two plates applying moderate pressure by hand. Insert nozzle into sprue opening in mold. Press mold into nozzle for 5 to 7 seconds. Make sure rubber mold is at 90 degree angle for best results.

5. Wait for 1 to 1-1/2 minutes to allow wax to solidify. Open mold carefully and remove pattern making sure that you do not force the pattern out of the mold.

6. Change wax in injector pot every 2 to 3 months. Use Kerr Laboratory Solitine or other wax solvent for cleaning of the wax pot and injection nozzle.
<table>
<thead>
<tr>
<th>Condition</th>
<th>Cause</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mold overfills</td>
<td>Air pressure too high</td>
<td>Reduce air pressure</td>
</tr>
<tr>
<td>Mold overfills</td>
<td>Wax too hot</td>
<td>Adjust temperature</td>
</tr>
<tr>
<td>Mold overfills</td>
<td>Mold plates held uneven</td>
<td>Hold plates firmly, distributing pressure evenly</td>
</tr>
<tr>
<td>Mold overfills</td>
<td>Mold held too long at nozzle</td>
<td>Hold for less time</td>
</tr>
<tr>
<td>Mold not filling</td>
<td>Air pressure too low</td>
<td>Adjust air pressure</td>
</tr>
<tr>
<td>Mold not filling</td>
<td>Wax not hot enough</td>
<td>Adjust temperature</td>
</tr>
<tr>
<td>Mold not filling</td>
<td>Nozzle plugged</td>
<td>Remove and clean</td>
</tr>
<tr>
<td>Air bubbles in pattern</td>
<td>Air pressure too high</td>
<td>Adjust air temperature</td>
</tr>
<tr>
<td>Air bubbles in pattern</td>
<td>Wax pot low on wax</td>
<td>Add wax, ensure wax pot is more than 1/2 full</td>
</tr>
<tr>
<td>Air bubbles in pattern</td>
<td>Wax too hot or too cold</td>
<td>Adjust temperature and stir wax to release trapped air</td>
</tr>
<tr>
<td>Wax brittle</td>
<td>Wax too hot</td>
<td>Adjust temperature</td>
</tr>
<tr>
<td>Wax brittle</td>
<td>Wax has been reused</td>
<td>Use new wax</td>
</tr>
<tr>
<td>Wax brittle</td>
<td>Molds cooling too long</td>
<td>Inject fewer molds during cycle production</td>
</tr>
<tr>
<td>Wax discolored</td>
<td>Wax too hot</td>
<td>Clean wax pot, add new wax</td>
</tr>
</tbody>
</table>
Mold Rubber Instructions

1. Preheat vulcanizer to 310°F / 155°C. Temperature should not exceed 325°F / 163°C.

2. Cut the rubber to fit into the mold frame.

3. Cut and form rubber around model, filling all voids.

4. Place second mold plate on top and pack between platens.

5. Determine the correct vulcanizing time by allowing 7.5 minutes per layer of rubber. For example a 3/4” (20mm) thick mold frame will take 7 layers of rubber and will take 53 minutes of vulcanizing time. For best results do not exceed these time limits.

6. After vulcanizing, remove and allow to cool at room temperature for approximately 25 minutes before cutting.

Vulcanizing Time

1 = 00:07''

7 = 00:52''
### Mold Rubber Troubleshooting

<table>
<thead>
<tr>
<th>Condition</th>
<th>Cause</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut mold does not seal evenly (warping)</td>
<td>Caused by tilt of platens</td>
<td>Ensure that platens are parallel in closing</td>
</tr>
</tbody>
</table>
| Voids in mold | Model not filled in with rubber | Pack rubber pieces into and around model  
Preheat vulcanizer to 310°F/155°C  
Tighten vulcanizer 1/2 turn past first resistance  
Allow 15 minutes at 310°F/155°C for every 1/4” / 6mm.  
For intricate molds allow 20 minutes at 290°F/143°C for every 6mm. |
| Mold delaminates after curing | Surface of strips not clean  
Rubber has begun to vulcanize | Use new strips. Do not contaminate surfaces with hands, and protect from dirt or dust. |
| Mold soft and sticky in center | Underheated. Cure too short.  
Heating element burned out. | Check temperature of platens  
Cure 15 minutes for each 1/4” / 6mm. |
| Mold has pebbly surface  
Mold is sticky and scorched  
Excessive shrinkage  
Lack of flexibility | Overheated | Check calibration of vulcanizer |