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Machinable Wax Reclaiming Procedure

One of the unique characteristics of Freeman Machinable Wax is that it can be remelted and remachined without significant change to its original properties.

The procedures and equipment required to perform the reclaiming process are quite simple but need to be done with certain precautions.

CAUTION: It is necessary to heat Machinable Wax to a temperature of 300°-310°F to melt it, therefore proper apparel should be worn during the melting and pouring operations. Heavy cotton-type gloves **MUST** be worn to protect your hands from hot containers and wax. Protective eye wear & face shield are highly recommended because of the possibility of hot wax splashing during the pouring process. Protect clothing by wearing an apron or shop coat.

WARNING: If hot wax does contact skin, **DO NOT TRY TO REMOVE HOT WAX FROM SKIN, IMMEDIATELY RUN COLD WATER OVER THE AFFECTED AREA.** Contact a physician IMMEDIATELY for first aid treatment.

Equipment Required -

- **APPROPRIATE SIZED CONTAINER** that can withstand at least 350°F or that can be thermostatically controlled to reach the required melting temperature.
- **WIRE MESH STRAINER** for filtering impurities from the wax when pouring. The grade of mesh typically used for kitchen sieves works well.
- **ALUMINUM MOLD** with an open-top type design that is approximately 10% larger than the finished size and shape of the block required. Aluminum provides the best cool-down characteristics for reclaiming Machinable Wax.
- **SILICONE SPRAY** mold release in an aerosol form is sprayed inside the aluminum mold prior to pouring in the melted wax. This will insure that the wax will readily release from the mold when cool.
- **PLYWOOD BOX** large enough to cover the entire aluminum mold. This will facilitate proper cool-down and prevent internal cracking and weakening of the wax as it solidifies.

Machinable Wax Specifications:

Hardness.....50-55 Shore D
Specific Gravity.....0.92
Melting Point.....226°F

Reclaiming Procedure -

IMPORTANT: Pre-weigh the wax to be reclaimed before proceeding with the Reclaiming Procedure so you will be assured of melting the correct amount of wax.

Example - If your model is 3" x 4" x 7" then your calculation would be $3 \times 4 \times 7 = 84$ cubic inches. $84 \text{ in}^3 \div 28.8 \text{ in}^3/\text{lb.} = 2.92 \text{ lbs.}$ of wax required to fill the mold. NOTE: Add 10% to the calculated weight (.292 lbs in this example) to allow for volumetric shrinkage.

IMPORTANT: Wear proper apparel and safety equipment during the following procedure.

1. Melt pre-weighed wax in appropriate size container other than the aluminum mold.
2. When temperature of the wax reaches 290°F, pre-heat the aluminum mold to 110°F.
3. Spray the inside surfaces of the aluminum mold with silicone release.
4. Pour melted wax through the wire mesh strainer (this step is only necessary if there is dirt or metal shavings in the wax) into the aluminum mold.
5. Cover the mold with the plywood box and allow wax to cool slowly over the next 24 hours. If the thickness of the wax is more than 3" deep, allow 48 hours to cool.

Please contact us if you have any questions about this procedure or encounter problems with the reclaiming process.