How To Make Tallow Sculptures

A Little Tallow History

Did you know chefs have been sculpting tallow for over 300 years? Back in the early days of the 17th century, chefs would sculpt butter into provocative shapes for the visual enjoyment of their patrons. Imagine the difficulty of this task without the convenience of refrigeration! In an effort to make life easier, the chefs of Europe began to combine butter with animal fats and, later, with wax to create a stabilized, creamy sculpting medium that was easier to work with and had a much greater shelf life. Because patrons reacted just as enthusiastically to these "faux" butter sculptures, chefs all over the world embraced this new medium and called it "tallow", referring to the animal fat used in its production.
Culinart, Inc. has taken this time-honored art form and, while adhering to traditional, old world formulas, improved upon it by incorporating non-yellowing, food grade waxes and only purified beef fat to create tallow that has a perfect consistency and an indefinite shelf life at room temperature.

The traditional formula for making tallow is as follows:

1/3 Animal Fat
1/3 Beeswax
1/3 Parafin

Method: Render beef, lamb or pork fat and strain through multiple layers of cheese cloth. Set aside. Melt beeswax and paraffin over medium heat. Combine all ingredients and stir until thoroughly incorporated. Pour into hotel pan or other non-porous, heat-resistant container and allow to cool completely at room temperature. Do not cool in refrigerator.

Problems With Traditional Tallow

In the 1950's and 1960's, tallow sculpting was very popular and practiced by chefs around the world. As sanitation principles and practices improved, tallow was frowned upon because the sculptures could grow rancid if not properly stored. The sculptures would also yellow very badly and eventually had to be discarded. These problems can be attributed to the use of unpurified animal fat and the use of beeswax.

Rendered Fat - The fat tissue in all animals and humans is where most of their chemicals, toxins and impurities are stored. There are also sweat glands interspersed throughout this tissue. Even though the fat is melted, the impurities are carried into the tallow mixture. Over time, unpurified animal fat will turn rancid and give off an unpleasant odor.

Beeswax – This is very sensitive to light. When exposed to natural or indoor lighting, a photo-chemical reaction occurs which turns this wax yellow. It can happen quite rapidly and was often confused with rancidity, when in fact only the wax was discoloring. Beeswax is not uniform from batch to batch because of the many regions and bee types that produce it.

Modern Tallow

Modern Tallow is made with the same proportions of fat and wax as traditional tallow. Purified and deodorized beef fat is blended with modern day waxes that resist yellowing and combine to produce a uniform product with tremendous sculpting and carving characteristics. Modern tallow never needs to be refrigerated and has an indefinite shelf life. It is not susceptible to photo-chemical reactions and resists discoloration over extended periods of time.

Types of Modern Tallow

carving method

Modeling/Carving Tallow – Modeling tallow, when shaved into curls and worked by hand immediately softens to the consistency of soft artist's clay. It can be manipulated into any shape and applied to armatures and other support structures. As it cools slightly to room temperature it firms up, and can be trimmed and detailed with tools and knives.

modeling method

This same tallow appears to have a firm texture out of the box. It is suitable for any tallow project that involves carving with knives and other sharp tools to produce the finished sculpture. Its creamy, smooth texture is ideal for intricate detail work, while its firmness produces a sculpture of improved durability.

casting method

Casting Tallow - An extremely firm tallow that cannot be softened by hand and requires great effort to carve on any large scale. It is intended to be melted and poured into molds to produce the final sculpture. Its resulting hardness makes casting tallow ideal for the sometimes rigorous unmolding process, especially with one-piece rubber molds.

TALLOW SCULPTING BASICS

1. Always temper tallow to 75 degrees F before working with it. Remember, tallow is made with purified animal fat (Butter) which is quite firm at cool temperatures.

2. Wash hands thoroughly before working with tallow. Condition hands by rubbing on a little oil or shortening to make hands smooth.

3. Work area must be absolutely clean.

4. MODELING METHOD OF TALLOW SCULPTING - Tallow will soften in your hands and your body heat will make it supple and very flexible just like soft artists clay. In order to maximize heat transfer, tallow should be shaved with a scraping tool or other utensil that can be scraped across the surface to produce thin curls or shavings that can be kneaded by hand. To soften tallow, take the shavings and press them together and firmly roll, squeeze and knead *with both hands*. **If tallow does not soften in a couple of seconds, it is too cold and should be tempered to 75 to 85 degrees F.**

scraping tool

5. To smooth tallow and create a natural shine, apply heat from a torch, hair dryer or heat gun over the surface of your sculpture. Apply heat with quick passes just until a shine appears on the surface. Be careful, too much heat can melt details.

6. When coloring tallow, soften tallow first and then work coloring gel into tallow until desired color is achieved. Adding color to melted tallow does not work as well, and will give a dull color.

7. When working with cheddar, chocolate or colored tallow, applying heat to the surface (step #5) will restore the true color and eliminate any unwanted sculpting marks, etc.

8. Maintain and clean a finished tallow sculpture by rinsing with warm water and applying heat to the surface (step #5). Cover with a large plastic garbage bag and store until needed.

9. Modern tallow can also be carved with knives and carving tools to create a finished sculpture. The best room temperature for carving tallow is 60 to 75 degrees F.

DO NOT GOUGE CENTER OF TALLOW BLOCK

Shave or scrape tallow block evenly across entire top surface of block. Tallow block can be kept warm by positioning a heat lamp over the block to create a gentle warmth that will keep surface of tallow warm.

DO NOT WARM TALLOW TO THE POINT OF MELTING IT

This creates an unusable consistency and must be cooled to reconstitute it. Collecting a large amount of tallow shavings in a plastic bag and placing in a roll warmer drawer set at low (75 to 80’F) is another way of keeping tallow warm.

Support Structures

Styrofoam

Real Styrofoam is a light, strong, clean and repairable material made by the DOW Chemical Corporation that can greatly conserve the amount of tallow used in large sculpting projects, making it the preferred choice of chefs worldwide. Its white rigid foam can be carved effortlessly with chainsaws, knives, hand saws, sandpaper, die grinders, etc., just like a block of ice. Once the styrofoam is carved, it serves as an excellent support for the application of modeling tallow. This is not the cheap kind of styrofoam that is made of compressed beads.

carvable block of Styrofoam

swan carved from block with chainsaw

finished swan using modern tallow

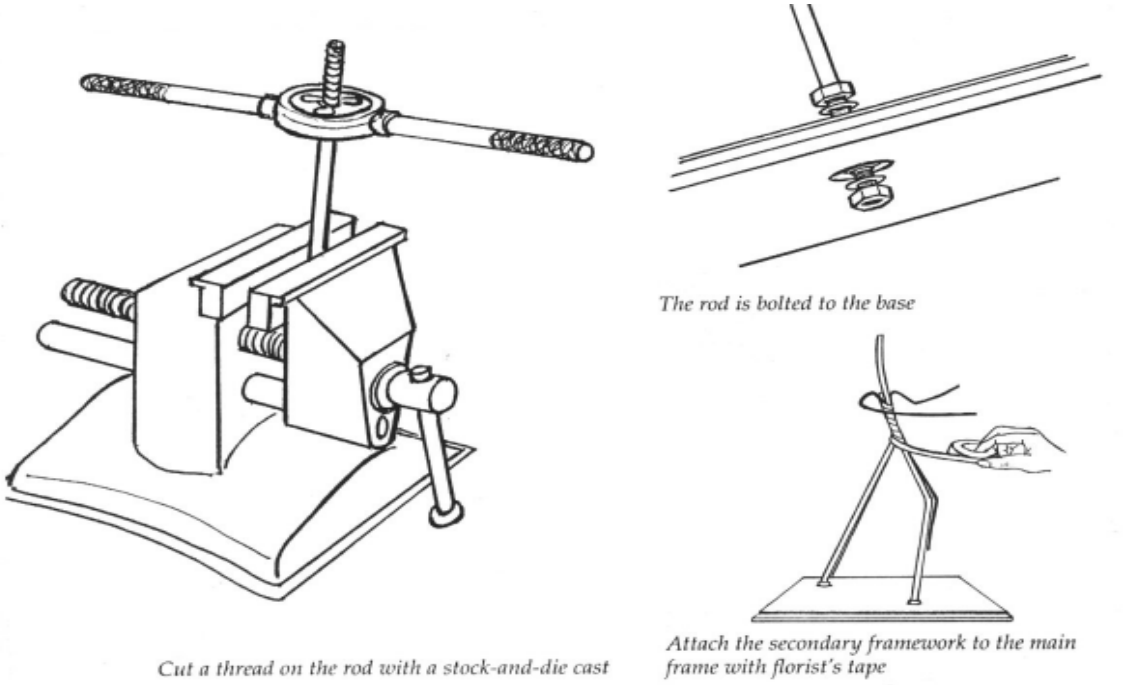
Base Coat

Because Styrofoam is a porous material, the first step in making a tallow sculpture supported by Styrofoam is to seal it with an initial layer of tallow called a base coat. Tallow is softened and applied by hand or sheeted between two sheets of parchment paper and applied to the Styrofoam support at a minimum of a 1/4 inch thickness. The base coat ensures that the Styrofoam is completely sealed and also helps in the addition of details to the sculpture.

Wire Armature and Wooden Base

Steel wire and rods are excellent support structures for tallow sculptures. They offer great stability, easy storage and transport, and are perfectly suited for appendages like arms and legs. The wire can be bent into whatever shape is required and can support quite a lot of weight. Wire of various thickness can be purchased from the hardware store. As the size of the tallow sculpture increases, so should the wire thickness. Supports can be attached to one another using floral tape, masking tape or fine aluminum wire. Aluminum or galvanized steel rods and wire are the best to use since they are resistant to rust and oxidation. After the armature is completed, spray-paint it white before applying tallow so that it doesn’t show through.

Diagram of Wire Armature



Cut a thread on the rod with a stock-and-die cast

The rod is bolted to the base

Attach the secondary framework to the main frame with florist's tape

From Margarine Modelling by Jean and George Hill. Published by Hospitality Press Pty Ltd., PO Box 426, Elsterniwick, Victoria, 3185, Australia

Add on Detailing – Base coat should be a minimum of 1/4 inch thick.

Softened modeling tallow can be rolled out between two sheets of parchment paper or food service film with a rolling pin. A set of pastry and aspic cutters can be used to make fancy shapes for detailing. Sheeted tallow can be cut into thin strips with paring knives and used for ribbons, bows, shoe laces, suspenders, clothing, etc.

> *Tip – Cutters and knives work even better with tallow when they have been heated. Keep the cutters in a 1/4 hotel pan filled with 1/2 inch of simmering water. Keep the paring knives in a 1 quart baine marie with simmering water. The cutting edges will be 212F and cut through the tallow quickly and cleanly!*

Pre-cut details can be applied right over the base coat and will adhere instantly. They can overlap each other to create a feathered look on birds or scales on fish. Sheets of softened tallow can be draped over sculpture and made into clothing like pants, dresses, etc.

Take Away Detailing – Base coat should be a minimum of 1/2 inch thick.

Using tools and knives, details can be cut and grooved right into the base coat. This type of detailing is used to create facial features and in areas requiring fine detail.

Tip – It is best to let the base coat cool to room temperature. The tallow will reharden and cut very cleanly.

Tip – Always take a stylized approach to detailing. We are not working for the Smithsonian Institute or the Audobon Society. Our work should be pleasing to the eye and create anticipation for a fine meal to come. A good reference to turn to for good, stylized illustrations of animals and people are children's books.

Torching

Once the tallow sculpture has been completed, a heat gun is used to finish off its surface. Heat guns are available at hardware stores and look similar to hair dryers. The difference is that they can give off heat up to 1000F. Using this gun, a stream of heat is directed at the surface of the sculpted tallow from about 1 foot away. When the heat gun is removed or redirected to another area, the tallow instantly resolidifies. Heat is applied to the entire surface of the sculpture, moving the gun in circular motions. Torching strengthens the sculpture greatly because air that was incorporated into the tallow during softening is released when the tallow is melted. The resulting hard skin of tallow protects the sculpture from smudging and it attracts much less dust. Torching also imparts a beautiful and long lasting luster to the finished sculpture.

Tip – Never torch an area longer than it takes to achieve a wet appearance. Prolonged heat will melt too much of the tallow and distort fine details.

Cleaning Tallow Sculptures

Tallow sculptures can be taken to the dish table and washed down with the water sprayer. The water should be adjusted so it is good and warm, but not smoking hot. Water at dish washing areas can exceed 180F, which will definitely melt the tallow sculpture. When washing a tallow sculpture, the water temperature should not exceed 120F. Washing a tallow sculpture will remove collected dust, fingerprints from handling, and also restore a beautiful luster to the surface of the sculpture. Once cleaned, the sculpture can be patted lightly with a clean cloth and allowed to air dry. Never wash a tallow sculpture with soap or detergents. Wash only with clean, clear water.

Tip – Always make sure styrofoam support structures are completely covered and sealed with tallow.

Storing Tallow Sculptures

Modern tallow does not need refrigeration. Tallow sculptures should be kept in a clean, dry storage area at room temperature.

Tip – Cover with a large garbage bag to protect tallow sculptures from dust and dirt during storage.

Advantages of Tallow

- Unlike ice, pulled sugar, chocolate, marzipan or pastillage, tallow is a stable material that doesn't harden, melt, spoil or crack over time.

- A tallow sculpture can be worked on over a period of days, weeks or months, during slow times and when it is convenient.

- Tallow can be added on and taken off, reshaped and smoothed innumerable times until perfection is achieved.

- Refrigerated or freezer storage is not necessary for tallow sculptures.

- Tallow sculptures can be used repetitively for many functions, unlike an ice sculpture, which has a single-function longevity.

- Tallow sculptures are easy to repair and maintain. They are also cleanable.

- Tallow sculptures incorporating styrofoam are light and easy to transport from room to room or off- premise.

- The making of a tallow sculpture can be easily delegated to employees that have the time to make them. Since the sculpting process is a series of simple steps (applying the base coat, for example), these employees can be used to accomplish part or all of the sculpture.

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