Chavant™
Made In USA

Castilene™

Sulfur-Free Castable Clay

Chavant™ Castilene™ is a meltable, versatile, non-drying modeling compound that models like clay and works like wax. It has the following properties:

- *Light Weight*
- *Can Be Easily Painted*
- *Sulfur-Free*
- *Holds Ultra-Sharp Detail*
- *Sculpting Tool Friendly*
- *Silicone Friendly*
- *Can Be Melted & Remelted*
- *Can Be Used for Lost Wax Processes*

PRODUCT OVERVIEW

Castilene™ is a high wax sculpting medium sculpts like clay when warm and is firm like plastic resin at room temperature (72 F/23 C). It's hardness and wax-like feel allows for ultra-fine detailing with a variety of tools and wide range of techniques. The unique characteristics of the **Castilene™** series are utilized for prototyping multi-part action figures, miniatures, jewelry, & model kits by professionals around the world. **Castilene™** is Sulfur-free and silicone friendly for easy moldmaking.

GENERAL PROCESSING RECOMMENDATIONS

WORKING WITH THE CLAY

Castilene™ is self-supporting and armatures are not generally required. Metal clay tools can be warmed & used to cut or work the clay. Please exercise extreme caution when shaping clay with hot tools such as waxers, wax pens, & denatured alcohol lamps. Do not apply direct flame to **Castilene™** as clay will brown and burn.

SMOOTHING THE CLAY

Clay Rake tools and burnishing loop tools are often used to smooth out the clay surface and make it uniform. Medium and Hard consistencies can be sanded and smoothed with sandpaper and sanding pads to a high polish. Rolling clay segments against warm surfaces can also result in a smooth clay surface. Generally, solvents have very little effect on the **Castilene™** due to it's high wax content. Stronger solvents such as naphtha, clear mineral spirits and turpentine can be utilized for some light smoothing of the clay. Quickly applying heat to the surface of the clay can also impart a high gloss finish to the clay.

SHELF LIFE

Unopened: stored at room temperature away from sunlight or sources of UV, it will have a shelf life of 2 years. See chavant.com for details

Opened: over time, clay exposed to air may oxidize and the surface may eventually dry out. Once opened, place clay in airtight container and store away from sunlight or sources of UV.

TECHNICAL OVERVIEW

Colors:

Green

Durometer / Hardnesses:	**Soft**	66A
	Medium	78A
	Hard	95A
Tack Level:		Low Tack
Wax Content:		High
Density:	**Soft**	69 lbs/cu.ft.
	Medium	69 lbs/cu.ft.
	Hard	69 lbs/cu.ft.
Specific Gravity:	**Soft**	1.10 g/cc
	Medium	1.10 g/cc
	Hard	1.10 g/cc
Softening Temp:	**Soft**	125°F/52°C
	Medium	130°F/54°C
	Hard	130°F/54°C
Trowelable Temp:	**Soft**	160°F/71°C
	Medium	160°F/71°C
	Hard	160°F/71°C
Brushable Temp:	**Soft**	170°F/77°C
	Medium	170°F/82°C
	Hard	170°F/82°C
Liquefy Temp:	**Soft**	185°F/85°C
	Medium	185°F/85°C
	Hard	185°F/85°C
Max Temp:		185°F/85°C
Packaging:		2.5 lb. block (1.13 kg.)

Do Not Exceed 185°F/85°C As Air Bubbles May Result

Chavant™
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SOFTENING BRUSHING TROWELING LIQUEFYING

Heating Equipment Options

- Temperature Controlled Crock Pots®
- Scientific/Laboratory Oven
- Hot Box With Conventional Temperature Monitor
- Warming Oven Dedicated For Clay Only *(Do Not Use Home Oven)*
- Microwaves Are **NOT** Recommended Due To Uneven Heating And Potential Burning.

SOFTENING THE CLAY

Castilene™ is most often warmed to a temperature (**Soft** = 125°F/52°C; **Medium** = 130°F/54°C; **Hard** = 130°F/71°C) to soften it. When it returns to room temperature it also returns to the initial firmness.

TROWELING THE CLAY

Castilene™ can also be heated to a state soft enough to be spread across a surface. (**Soft** = 160°F/71°C, **Medium** = 160°F/71°C; **Hard** = 160°F/71°C) As these temperatures are very hot and can cause burns, a metal trowel (or similar spreader) is needed to apply the hot clay safely. When troweling, a clay can be spread easily across a vertical armature surface with minimal to no slumping in a ¼ inch thickness (1.27 cm).

BRUSHING THE CLAY

Castilene™ at (**Soft** = 170°F/77°C; **Medium** = 170°F/77°C; **Hard** = 170°F/77°C) is considered the brushing temperature of the clay. This temperature produces a lower viscosity (thinner) clay, suitable for initial coating on armatures or other surfaces that can be applied with a brush. A small scale test against surfaces to check for suitability is always recommend.

LIQUEFYING THE CLAY

Castilene™ can be liquefied and poured (**Soft** = 185°F/85°C; **Medium** = 185°F/85°C; **Hard** = 185°F/85°C). This method is utilized to make exact reproductions (called castings) of a form by pouring the liquefied clay into a mold; that can be further shaped and revised. Clay might experience separation of the base materials during the heating process. Periodically mixing the liquid clay during the process and before pouring will ensure uniformity of the clay. It is recommended that the mold be heated to at least 150°F/66°C prior to pouring liquefied clay into mold for best surface detail.

*Note: **Castilene™** can encapsulate fabrics and bond mechanically. It is possible to dip porous fabrics in liquid **Castilene™** to make extremely thin, shapeable parts that hold their pose when cooled. Not all fabrics are heat resistant. A small scale test with a non-critical example of your fabric is recommended first to help you determine suitability before utilizing in a larger or more critical model or sculpture.

LOST WAX POURING RECOMMENDATIONS CONTINUED ON BURNOUT INSTRUCTIONS.

CLEAN UP

Although **Castilene™** can be cleaned from tools and most surfaces with naptha, it's generally more resistant to solvents. Sometimes lightly warming a surface or tool can return **Castilene™** to a softer, easier to remove state.

SAFETY FIRST

Keep Out Of Reach Of Children

Avoid overheating the clay, results in serious burns to the skin. The Safety Data Sheet (SDS) for this or any Chavant product should be read prior to use and is available upon request from Chavant. All Chavant products are safe to use if directions are read and followed carefully.

BURNOUT INSTRUCTIONS

CASTILENE: IMPORTANT FOUNDRY PROCEDURE

Because **Castilene™** is a newer product and unfamiliar to some foundries, we offer the following suggestions for a successful burnout.

The foundry should treat a sculpture much as a wax pattern would be treated when spreuing and gating with the exception that larger vents and drilled holes be used for better flushing and blowing out the powdery residue of the material.

Castilene™ contains an amount of organic material in its formulation and therefore should be burned out for a longer time than straight wax models.

It is recommended that a temperature of 1500°F be maintained for 15 to 20 minutes longer than your normal burnout time for microcrystalline wax sculptures in ceramic shell molds. Apply a temperature of 1000°F or above for 1 to 2 hours longer (depending on the size of the mold) if using a plaster based investment.

A small amount of powdery residue may be left in the mold after burnout. This residue should be blown out with an air gun through the sprue and vents if using a ceramic shell and vacuumed out if using a plaster based investment. This prodcedure will insure fidelity to the surface detail of the casting.

If **Castilene™** is trapped in an area of the mold that cannot drain freely, it may char into hard pieces of material that cannot be blown out. This will result in imperfections in the casting.

When draining, do not allow **Castilene™** to burn or flame. Burning may cause the material to form charcoal pieces too large to blow out of the mold. After draining, the temperature of the mold may be raised to complete burnout.

BURNOUT EXAMPLE WITH LARGER VENTS AND DRILLED HOLES: