

cast materials	type of mold	release agent	advantages	disadvantages
Wax	Will work with various molds; however, if hollow casts are required then it's better to use a plaster mold.	If pouring into an all plaster mold, the mold must be soaked in water for at least 30 minutes first. Soaking the mold in water will prevent adhesion. If casting into a rubber mold, no release agent is needed.	Cast wax is easy to manipulate with carving tools and/or a low temp soldering iron. Wax is somewhat flexible, so it is easy to remove from molds. Easy to cast hollow when using a plaster mold. White wax is translucent.	Can be painted, but the paint is likely to chip and fall off over time. Impermanent; will melt or slump on a hot day.
Plaster	Will work with both rigid and flexible molds.	Cast plaster will adhere to other plaster. If casting directly into a plaster mold, be sure to apply vaseline first to prevent adhesion.	The cheapest castable material we'll use, plaster is great for creating large objects. Also, plaster is easy to finish with sandpaper and carving tools, it can be glued, and it will take paint well.	Since plaster is viscous, it is sometimes difficult to pick up fine details in a mold. Air bubbles are sometimes an issue. A plaster form, if thin, is likely to be delicate. Large plaster casts are heavy.
Hydrostone	Will work with both rigid and flexible molds.	Hydrostone will adhere to plaster. If casting directly into a plaster mold, be sure to apply vaseline first to prevent adhesion.	Incredibly strong and durable. Good for outdoor applications.	Hydrostone is extremely hard, so it is difficult to finish with sandpaper or carving tools. Also, hydrostone is very heavy.

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Urethane plastic	Works best with flexible molds. Plastic is moisture sensitive, so it will often form air bubbles if cast into a plaster mold.	If casting into a rubber mold, be sure to apply silicone spray or universal mold release spray-- otherwise the plastic will bond to the rubber. If casting into a plaster mold, use vaseline for release.	Strong and easy to modify. Can be removed from mold before fully cured and deformed. Easy to finish with sandpaper and carving tools. Can be glued. It will take paint well as long as the release agent is removed with soap first.	Moisture sensitive while setting, and <u>very expensive</u> . Not good to use on large forms or in great volumes.
Urethane foam	Works best with flexible molds. May be moisture sensitive, so it has the potential to form large air bubbles if cast into a plaster mold.	Use Ease Release 2831 if casting into a rubber mold. If casting into a plaster mold, use vaseline for release.	Very lightweight, and excellent for filling volumetric molds. Easy to finish with sandpaper and carving tools. Can be glued. It will take paint well as long as the release agent is removed first with soap.	Interior has bubbles by nature, so foam may not be a good option if the surface will be shaped after casting and you require a very smooth finish. May pick up slightly less detail than other materials.