

Casting

What is casting?

Casting involves liquid plastic being poured into an open mould. Once the material has cured it is removed and hand finished.

Essentially a craft process, casting is a low cost method for low volume production. It uses gravity, as opposed to heat and pressure, to fill the mould and produces simple, smooth shapes. The maker has great control over colour mix or embellishments so that each moulding has the potential to be different.

How does the process work?

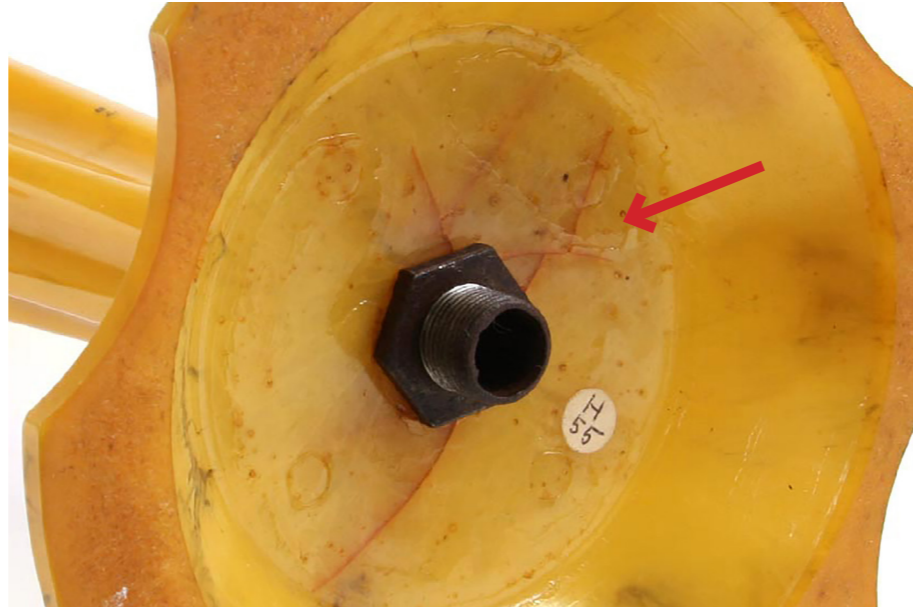
- Plastic, in liquid form, is poured into an open mould, which itself is often moulded from plastic.
- The material hardens and cools in the mould.
- The object is removed and finished.

What plastics materials can be used?

Commonly phenol formaldehyde as a liquid resin, polymethyl methacrylate, polyamide and polyurethane.

Find objects with [cast](#) elements in the MoDiP collection. View the [animation](#) to see how the process works.

What are the clues?



Frequently trapped air bubbles, or their remains, on the surface.

When was the process first introduced?

Casting has a long history with traditional materials, like metals.

Advantages:

- Cost of equipment, tooling and moulds is low.
- The process is not complex.
- Material wastage can be controlled and hardened material can sometimes be reused by placing it in new liquid as it solidifies.
- Open casts allow manipulation of the finished result throughout the curing process.

Disadvantages:

- Output rate is slow.
- Moisture and air bubbles can be difficult to manage.
- Variables such as temperature can affect the curing process.

Uses:

Sheets, rods, tubes, jewellery, radio housings, designer furniture, and paperweights.