

Safety Instructions

During the leather moulding, be careful with the hot water when putting the leather in the tub to not burn oneself.

Be careful with the heat gun for very hot air that can burn.



Leather Moulding

**SUBSTRUCTIVE
MANUFACTURING**

Leather patterning

This activity method has been designed by Shannon Sykes from On!fait for shemakes.eu. It is based on the Textile Scaffold week of Fabricademy and alumni's Jean Marie Durney local practice. The manual has been developed by Fab Lab On!fait, and Fab Lab Barcelona at IAAC for the SHEMAKES project.



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Materials & Tools

Materials

- ▶ Leather (0.5-1.5mm)
- ▶ Plywood (148mm x 210mm x 40mm) x2 (for the moulds)
- ▶ Plywood 198mm x 250mm x 4mm (for the frame)
- ▶ Wood Lacquer/varnish (each of them are great waterproof sealant)

Safety Equipment

- ▶ Protective goggles for CNC

Tools

- ▶ CNC mill the moulds
- ▶ Laser cut the frame
- ▶ Clamps and table clamps
- ▶ Heat gun
- ▶ Textile scissors
- ▶ brushes
- ▶ lacker (shellac, varnish or other)
- ▶ pot
- ▶ hot plate or kettle
- ▶ silicone gloves
- ▶ protection sheet to cover the table from water

Leather Moulding

Step by step instructions

Process overview

- ▶ Step 1 : Lacquer your moulds
- ▶ Step 2 : Prepare your leather
- ▶ Step 3 : Soak the leather
- ▶ Step 4 : Position and stretch
- ▶ Step 5 : Press the leather
- ▶ Step 6 : Keep tight by placing the clamps
- ▶ Step 7 : Wait for the leather to dry

Note : Before you start this process, fabricate a positive and a negative mould using the CNC milling machine and laser cut the plywood frame.

Step 1 : Lacquer your moulds

- ▶ Waterproof your MDF or plywood moulds with varnish/lacquer and let them dry.

Step 2 : Prepare the leather

- ▶ Choose a piece of leather and,
- ▶ Cut it so that it is slightly bigger than the mould (for example 15mm from all sides).

Step 3: Soak the leather

- ▶ Soak the leather in 85° water for 1-2min.

Note : Timing may vary according to the thickness and type of leather. Small sample trials are suggested.

Step 4 : Position and stretch

- ▶ Place the leather on the positive mould, choosing the correct side (the interior flesh should be underneath) Stretch with your hands and use the frame above the leather so it expands before we put the second mould.
- ▶ Make sure you practice beforehand which way you assemble your moulds.

Note: If you want a positive pattern, make sure you position the flesh side on the negative mold.

Step 5 : Press the leather

- ▶ Place the negative part of the mould and tighten it with clamps (ideally 4 clamps for 4 corners) or table clamps.

Step 6 : Wait for the leather to dry

- ▶ Let your mould with the leather fully dry overnight. You can use a hot air gun to accelerate the process.

