Instructions for use of ImpResin90 for the wood stabilization process

ImpResin90 ist a thermally cured resin, used to harden and stabilize most porous materials, especially wood.

Equipment needed:

- ImpResin90 resin;
- vacuum chamber, intended for stabilizing wood, recommended by VacuumChambers.eu;
- vaccum pump, two-stage, oil pump, recommended by VacuumChambers.eu
- small oven, that is able to produce and maintain a constant temperature of 90°±10°C, preferably with a thermometer;
  WARNING! Do not use the oven that will be used to prepare food.
- aluminium foil;
- stabilization material with a humidity of 10% and less – for wood 5% and less;
- dyes for coloring resin, if the wood has to be colored;
- personal protective equipment: safety glasses, prtoective gloves;

Preparation of wood for stabilization

Pieses of wood intended for stabilization should be dry and clean. Ideally if their humidity should not exceed 5%.

If the pieses of wood are moist, they must be preheated in the oven.

WARNING! After heated in the oven, leave your items to cool to room temperature in air tight container. This is necessary because a very dried, hot piece of wood will start to colect moisture form the air as soon as it starts to cool down. You should also not stabilize hot pieces of wood, because it will cause premature polymerization.

Safety instuctions:

Please check before starting worki f the vaccum chamber and accessories are clean and undamaged an are they sutiable for safe use.

The chamber and the vacuum pump must be on a flat, safe surface.

The course of proces:

1. Prepare your pieces of wood.
2. Place the pieces in the vacuum chamber and weight down.
3. Add the resin so that your pieces of wood are completely cover with resin.
4. Put the lid on the vacuum chamber container. Make sure it is centrally located on the tank. Make sure it’s placed centrally on the tank. Switch the intake air valve to the OFF position (perpendicular to the valve). Switch the exhaust air valve to the ON position (parallel to the valve).

5. Turn on the vacuum pump and keep it until there no air bubbles or a small amount.
   WARNING! Pumps are not intended for continuos operation. The recommended working time of such a pump should not exceed 30 minutes. To avoid overheating the pump, degas pieces of wood for about 30 minutes, then close the valves on the vacuum chamber and switch off the pump, wait for the pump to cool down, then repeat the cycle until the desired effect is obtained.
6. Release the vacuum and leave the pieces of wood immersed twice als long as they have been under vacuum.
7. Remove your pieces.
8. Wrap them in the aluminium foil.
9. Cure at 90°C, depending on the size of wood pieces, this proces takes 60-90 minutes.
10. After removing form the oven (WARNING! Risk of burn) unwrap the foil and let it cool down at room temerature. If the foil stucks, remove it with a knife.
11. Do not leave any remnants of resin in the chamber. The unused resin should be poured into a separate container and stored in an enclosed container in a dark and cool place.
12. The chamber and the tank, that had the contact with the resin, wash with water and soap. Solvents or other chemicals are not necessary for this.

Dyeing of the resin

Resin can be colored. We recommend Alumilite dyes, available in our store, which are efficient, concentrated and allow to produce nice and vivid colors.

Gel dyes should be directly added to the resin and then you can stabilize the wood in such a colored resin.