

Professional tip

## Water-resistant coatings on solid wood furniture with shellac-paints

<b>Preparation:</b>	Gradual sanding up to grain size 240
<b>Priming:</b>	With ARDVOS Universal Wood Oil N° 266 or DARIX Transparent Furniture Stain N° 297
<b>Drying time:</b>	Approx. 16-24 hours. Only after complete drying intermediate sanding with grain size 400. Afterwards dust the surface well!!!
<b>Consumption:</b>	Approx 25 - 40 g / m <sup>2</sup> , with a brush or a cotton cloth/sponge. For spraying dilute with 10% SVALOS Dipping and Spray Thinner N° 293. Highly absorbent surfaces need to be primed twice.

### Why should be primed with an oil?

1. The water resistance is greatly improved by the penetration capability of LIVOS oils, for example, ARDVOS Universal Wood Oil N° 266 and the formation of a wood oil zone. (This is not the case with KUNOS Natural Floor Sealer N° 241, MELDOS Natural Resin Hardening Oil N° 264 or DUBNO Priming Oil N° 261.)  
Due to its drying behavior shellac can penetrate only very little into timber substrates.  
As a colored primer use for example DARIX Transparent Furniture Stain N° 297.

2. Oil mixtures wet the wood in deeper areas and emphasize the color of the wood grain.

3. In case of direct contact with alcohol-containing shellac certain wood extractives (for example in case of basswood) can be dissolved and cause surface defects. Rising air bubbles in some hardwoods such as beech and cherry can lead to air inclusions in fast drying shellac films when the shellac is applied directly onto the raw wood by spraying.

### Shellac application by spraying:

Room temperature should be at least 18 ° C.  
The relative air humidity should be below 65%.

The alcohol dissolved in shellac dries extremely quickly, since alcohol evaporates 8 times faster than water.

The evaporating alcohol cools the dried shellac film down for a short time. Tests have shown a cooling down of the wet film surface by 5° C. This may cause an air moist condensation in the wet film especially in humid - warm summer climate. The paint film then shows a whitish milky film. That means that it is very important to ensure dry and warm rooms and to eliminate sources of possible dust pollution.

The thorough cleaning of the spray equipment, for example the spray gun, after working with oleaginous products is very important. We recommend the KIROS Thinner N° 710, as alcohol is able to dissolve dried paint and oil particles.

When using LIVOS - shellac from already opened containers, you should filter it with 100 µm gauze.

**Distance between the spray head and the object: 15 -20 cm**

If painted at this distance, the paint droplets in the spray mist lose only little solvent on the trajectory to the wooden surface. In 30 - 40 cm distance shellac droplets low in solvent reach the wooden surface, which are no longer able to flow into a smooth, glossy film. The result is a rough, dull surface. When this occurs, the surface must be coated once more from a closer distance, for example 20 cm, without intermediate sanding.

**For an optimal spray viscosity use the following dilution agents:**

**LANDIS** Shellac High Gloss N° 701 + 30 - 40% KIROS Thinner N° 710

**BELOS** Shellac Satin Gloss N° 706 + 30 - 40% KIROS Thinner N° 710

**TREBO** Shellac Semi Gloss N° 709 + 40% KIROS Thinner N° 710

With help of the dilution agents the viscosity is reduced with the result of a spray mist with a very fine droplet diameter at relatively low pressure. Furthermore, the resulting droplets are rich in solvents.

In case of improper dilution the droplets with a large diameter cannot even out on the wet film which inhibits the formation of a smooth film during the very short flash-off time. The result is an orange peel texture of the paint coat. Reason: In the relatively short time in which the shellac wet film can flow over the surface, it comes to a lowering of shellac particles low in solvents (higher density) and a rising of shellac particles rich in solvents (low density) which creates turbulences in the wet film. These processes take place in microscopic spaces in the wet film. On the surface of the dry film, the process can later be identified as an orange peel structure.

With the correct dilution agent and the correct distance to the object, the shellac reaches the surface with the right wet film viscosity. The high mobility of the dissolved shellac particles results in a flat dry film surface and a uniform gloss.

**Nozzle size:** 1,4 - 1,7 mm

**Pressure:** 3,0 - 3,5 bar

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