



## Guide Aluminum - Aluminum Pretreatment

**Attention acid! Corrosive!**  
**Always wear protective clothing such as gloves and goggles! Caution in handling**

Aluminum is a base metal and forms a thick oxide layer within a short time. Coating is not feasible on this oxide layer. In order to be able to coat aluminum nevertheless, a zincate layer is usually applied as a thin intermediate layer. Subsequently, aluminum can be gold-plated or otherwise coated.

With pure aluminum the aluminum pretreatment works perfectly, with many other Al alloys also, except with aluminum-silicon alloys this procedure does not work at all.

When using the aluminum pretreatment, the following happens:

The aluminum pretreater removes this oxide layer and simultaneously coats it with zincate. The zincate thus prevents a new oxide layer from forming on the surface.

### **Application and procedure:**

The aluminum should be sandblasted or similar beforehand and then polished to a high gloss so that all thick existing oxide layers are removed. Also, a glossy surface comes out better than a matte one.

Strong degreasing of the surface with our Cleaner

Do not touch the surface again

Immersion method: Currentless either place the part in a tub, immerse for about 1-3 minutes depending on size, pull out and continue until the surface is uniformly dark or mouse gray.

Or

Using a sponge or cotton cloth, apply the pre-treater to the surface and rub until the surface turns uniformly dark to mouse gray. .

The treatment time depends on the composition of the aluminum, its alloys and the temperatures. As soon as the surface turns uniformly mouse-gray to dark, the reaction has taken place, if not extend the exposure time accordingly.

Now rinse with distilled water and best leave in the water until we have prepared everything for further coating! Do not touch the surface!

Rub excess zincate from the surface with soft cloth towels.

Now you can start plating with alkaline copper or directly with nickel.

Alkaline copper is suitable for this purpose. After the first layer application, increase the voltage and copper thickly. Do not use acidic copper, this will dissolve the zincate layer again!

You can then nickel plate the copper layer at approx. 4 volts (the entire surface for at least 10 minutes).

The thicker the layer, the better it bonds with the zinc layer underneath. Also, the subsequently applied gold layer can form a better bond with the nickel.

The nickel layer will usually be quite dull. Polish it to a shine with our polishing agents or using a polishing stand.

You can then coat all other metals on this nickel-plated layer as usual!

The aluminum pre-treater is highly alkaline and contains, among other things, sodium hydroxide. Therefore, the use of safety equipment (protective goggles, gloves and possibly a smock)) and the observance of the safety instructions are required when handling.

Always store the product in a tightly closed container.

Please read all information here and on the label thoroughly.

The provisions of the Water Resources Act and the local waste water regulations must be observed.

