

GRAFMETAL

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User manual of GRAFMETAL protective paste for laser processing of materials

Scope

GRAFMETAL protective paste is used to protect materials such as engraving laminates, plywood, or acrylic during CO2 laser processing. The protective paste protects the material from ugly burns and saves time and effort after laser processing, as thorough cleaning or grinding is then no longer required. The paste works best when processing a large number of small parts, where manually peeling off protective foil would take a lot of time and be tedious.

How to use

1. Remove the protective foil from the material you want to process, if it is protected by it.
2. Stir the paste right before using.
3. Apply GRAFMETAL protective paste to the engraving laminate, plywood or other material. The layer should be quite evenly applied. Use a brush or spatula for application.
4. Wait a few minutes for the layer of preparation to even out.
5. Carry out laser engraving and cutting. Take into account that the laser, in addition to engraving and cutting the material, will also have to penetrate the paste, and therefore higher power and/or slower runs should be used.
6. After treatment, GRAFMETAL protective paste can be removed by rinsing it in a stream of running water or by immersing it in a tank filled with water and stirring gently to avoid damaging the parts. When working with plywood for laser processing, do not use hot water and keep exposure to water time to a minimum. When cleaning glossy and sensitive materials, such as HIPS, be careful not to scratch the surface.

Paste application

The paste is an additional barrier through which the laser must burn through, so it is recommended that the paste be spread on the material relatively evenly, although it does not have to be perfect. In case of large differences in the thickness of the paste, it is recommended to process the material at more intensive parameters obtaining deeper engraving, i.e. at higher power or lower laser speed. In this way, differences in the depth of the engraved areas will not be visible. The use of shallow engraving, on the other hand, requires a perfectly even thickness of the protective Paste layer on the object, as in areas with a thicker Paste layer the laser may not penetrate at all. It is recommended to apply the paste with a brush or spatula. The thickness of the paste layer should be adjusted experimentally for your application.

Paste rinsing

The paste can be rinsed from the laser processed parts with a stream of water or by immersing it in a tank filled with water and stirring it gently. Be careful, as intense stirring can damage laminate, plywood or acrylic.

Plywood for laser processing should not be exposed to water for too long and should not be rinsed with warm water. Otherwise, it may suffer surface damage.

Sensitive and glossy materials such as HIPS can be scratched by rubbing them during rinsing, so care should be taken when rinsing.

If deep engraving has been performed, rinse the residual paste from the obtained pieces with a stronger stream of water, or assist with a sponge or a brush. To avoid these inconveniences, it is possible not to do very deep engraving.

Safety

GRAFMETAL protective paste is a safe material.

Yield

Apply layers of paste as evenly as possible.

Paste yield is approximately 250 ml/m²

THE PRODUCT IS INTENDED FOR PROFESSIONAL USE ONLY. THE PRODUCER IS NOT RESPONSIBLE FOR ANY INCORRECT USE THEREOF.

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