POLIGRAT-PRODUCTINFORMATION
POLIGRAT E 398

Electropolishing of titanium and titanium alloys

Due to it`s strength, corrosion resistance, low weight and biocompatibility, titanium is increasingly used for high-quality, functional workpieces. The application ranges from medical technology to apparatus engineering, vehicle and aircraft construction to sports equipment and jewelry.

The electropolishing of titanium and titanium alloys provides surfaces of the highest quality in terms of purity, cleanability, corrosion resistance and passivity. Electropolished surfaces are free of burrs, scales and particles. Their high gloss makes them attractive for decorative applications.

left – before treatment **right – after treatment**

Properties and effect

The electropolishing process **POLIGRAT E 398** is suitable for workpieces made from titanium and titanium alloys and Nitinol only suitable to a limited extend. The surface becomes bright, burr-free, clean and smooth on a microscopic scale. Depending on the material, roughness values can be achieved down to the range of <0.1 µm Ra.

POLIGRAT E 398 removes damaged material surfaces without mechanical, thermal and chemical stress and develops the pure properties of the material.

The very high removal rate allows short processing times (usually 0.2 to 5 min), so that single-part treatment can be carried out quickly and efficiently.

Application

POLIGRAT E 398 is supplied ready for use and applied in immersion bathing. The electrolyte is specially developed for single-part treatment. The workpieces can be processed on a jig

The electrolyte is anhydrous and highly hygroscopic. Before introducing to the electropolishing bath, the parts must be dried. Pay attention to a complete drying.

After electropolishing the surface must be rinsed clean. The rinsing water is strongly acidic and contains the dissolved metal. It is to be treated and disposed of according to the statutory laws and regulations.

Technical data

Specific weight/density:	1.48 g/ml
Application:	undiluted
Anodizing voltage:	25 V
Working temperature:	+20 to +35°C
Application time:	10 s to 5 min

Supply

Packing units:

- Plastic bottle 1.5 kg (0.9 l)
- Single-use canister 7 kg (4.9 l)
- Single-use canister 15 kg (9.8 l)
- Single-use canister 40 kg (26.1 l)

Your Advantages

- non-toxic and quickly treatment
- leveling of micro-roughness
- burr-free, metallically pure surfaces
- stress-free material removal
- Nitinol processing possible

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