

# TWEEZERS - MATERIAL, SHAPE AND APPLICATION

## TYPES AND APPLICATIONS

Our product selection ranges from microscope tweezers manufactured with exact tolerances (also recently available with ergonomically adapted, recessed grips) to interchangeable or cutting tips to all possible universal shapes and even locking tweezers.

Traditional tweezers are made from high-quality steel or stainless steel. We also manufacture tweezers made from titanium, ceramic, plastic and even bamboo.

The different surface finishes allow us to support a vast range of applications.

### Delicate

SMD assembly requires the finest precision tweezers due to the increasingly smaller components. The variety of shapes and a parallel tip end enable reliable handling of components, even in confined spaces.

### Ultra-fine

For precise gripping, holding and positioning work with a tip width of 0.2 mm at a tolerance of +/-0.05.

### Geometric

For easy removal and insertion of round or cubic components, every imaginable design is possible

### Universal

Partially cut (small cross grooves on the tips) for better and stable gripping. They have precise, parallel tips and are used in the medical sector to remove foreign objects.

### Wafer

For positioning flat and thin components, such as highly sensitive and fragile wafers (glass wafers, etc.), thin PCBs and LCDs.

### Cutting

Best suited for soft wires up to Ø 0.25 mm, for example, copper wire, gold wire and silver wire.

### Self-holding

Self-holding tweezers in different shapes are suitable for simple holding and positioning.

### Interchangeable tips

The tips are connected to the body by a screw joint, allowing them to be changed.



## MATERIALS, SURFACE AND PROPERTIES

### **Stainless steel (SA)**

Anti-magnetic, corrosion-resistant, resistant to acids and chemicals, good conductivity, very hygienic, sterilisable, food-safe, recyclable

### **Titanium (Ti)**

Anti-magnetic, corrosion-resistant, resistant to acids and chemicals, antibacterial, good conductivity, glare-free, solder-repellent, heat-resistant (melting point is 1677°C)

### **Quality steel (FE)**

Protected from corrosion with nickel plating, not anti-magnetic, not resistance to acid.

### **ESD coating**

Provides a bleeder resistance of  $10^6$  -  $10^9$  ohm

### **VDE dip-insulation**

For working with voltages up to 1000 V, in accordance with DIN IEC 60900 / EN 60900

### **Dip-insulated (red) or lacquered (red)**

anti-allergic, non-slip, secure hold

### **PTFE coating**

Heat resistant up to 280 °C (536 °F), anti-allergic

### **Bamboo (BA)**

Tips are individually shapeable, non-conductive, partially chemical resistant, light in the hands

### **ESD ceramic zirconia (ZC)**

Dissipative  $10^6$  -  $10^9$  ohms, extremely wear resistant, heat resistant up to 800°, acid and chemical resistant, solder-repellent

### **Plastic (PA)**

Conductive between  $10^3$  -  $10^5$  ohms, glass-fibre reinforced plastic material, resistant to acids, heat-resistant to 175 °C, free from silicone and armin

### **Carbofib (CF)**

Carbon-fibre reinforced plastic, conductive  $10^2$  -  $10^3$  ohm

### **Plastic (PP)**

Low-priced alternative, insulating, good chemical resistance, high thermal stability, light in the hands.

### **Delrin (DEL)**

Universal plastic, fully insulating  $10^{13}$  -  $10^{15}$  ohm

