

249 Plastic Replaceable tip Tweezers

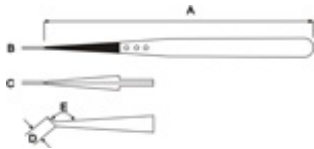


Strong tips

A 5" 130 mm

B 0.09" 2.2 mm

C 0.09" 2.2 mm



249CPR.SA

Anti-Magnetic Anti-Acid Stainless Steel body with ESD PEEK (CP) tips

General notes *Plastic type CP*

- **PEEK** polyetheretherketone reinforced with carbon fibre
- very hard, rigid, high tensile and flexural strength, very high wear resistance
- high heat capability (260-300°C), good dimension stability, low thermal linear expansion coefficient
- excellent resistance to chemicals and aggressive agents, excellent resistance to thermal ageing
- ESD-safe material

- typical applications include handling of components in cleaning/chemical/assembly processes also at high temperature (soldering)

Mechanical properties

| | | |
|--|-----------|-----------------------|
| Flexural modulus +23°C: | 21400 MPa | ISO 178 ASTM D 790 |
| Flexural strength +23°C: | 350 MPa | ISO 178 ASTM D 790 |
| Tensile modulus +23°C: | 24000 MPa | ISO 527 ASTM D 638 |
| Tensile strength +23°C: | 190 MPa | ISO 527 ASTM D 638 |
| Izod - Impact strength (notched) +23°C | 65 J/m | ISO 180/4A ASTM D 256 |

Thermal properties

| | | |
|---------------------------------------|-------|------------------|
| Temp. of defl. under load (1.80 MPa): | 300°C | ISO 75 ASTM D648 |
| Continuous Use Temperature: | 260°C | 20'000 h |
| Short Time Temperature | 300°C | |

Electrical properties

| | | |
|----------------------|---------------------|-----------|
| Surface resistivity: | 10 ⁶ Ohm | |
| Decay time: | < 0.2 sec | 1000-10 V |

Other properties

| | | |
|--------------------------------------|------------|----------|
| Density | 1.39 g/ccm | ISO 1183 |
| Water absorption in water 23°C (24h) | 0.01% | ISO 62 |

General Notes *Stainless steel type SA*

- low carbon austenitic steel (Material number 1.4435, DIN X2CrNiMo18-14-3, AISI number 316L)
- contains from 16.5 to 18.5 wt% chromium and has important quantities of nickel and molybdenum as additional alloying elements
- non-magnetizable
- good corrosion resistance to most chemicals, salts and acids
- generally used where corrosion resistance and toughness are primary requirements
- typical applications include tweezers for the electronic industry, watch-makers, jewelers and laboratory and medical applications in moderately aggressive chemical environments

Composition

| Component | Wt.% | Component | Wt.% | Component | Wt.% |
|-----------|---------|-----------|-----------|-----------|-----------|
| C | ≤0.03 | Si | ≤1.0 | Mn | ≤2.0 |
| P | ≤0.045 | S | ≤0.03 | Cr | 17.0-19.0 |
| Mo | 2.5-3.0 | Ni | 12.5-15.0 | | |

Mechanical properties:

| | |
|----------------------------|-----------------------|
| State | annealed |
| Density | 8.0 g/cm ³ |
| hardness HB30 | ≤215 |
| Hardness Rockwell B | 79 |
| Tensile strength, ultimate | 500-700 MPa |
| Tensile strength, yield | 290 |
| 0.2% Yield stress | ≤200 MPa |
| Elongation, break | 40% |
| Modulus of elasticity | 200 GPa |

Thermal properties

| | | |
|-------------------------------|--------------|------------|
| Coef. of lin. therm expansion | 16.0 E-6/°C | 20°C-100°C |
| Coef. of lin. therm expansion | 17.0 E-6/°C | 20°C-300°C |
| Specific heat capacity: | 0.50 J/(g·K) | |
| Thermal conductivity: | 15W/(m·K) | |
| Continuous use temperature: | 350°C | |
| Max service temperature, ait | 925°C | |

Electrical properties

| | |
|-------------|-----------------|
| Resistivity | 0.75 E-4 Ohm.cm |
|-------------|-----------------|

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