PRECIOUS METAL ALLOYS / MATERIAL PROFILE

# Pt90Ir10 Capillary Tubing

Platinum–iridium 90/10 / Round tubes, cut lengths and precision sleeves

## 01 Nominal composition by mass

Specify Pt90Ir10 (also written PtIr 90/10) on the drawing and purchase order.

**PLATINUM / Pt**

**90 wt%**

**IRIDIUM / Ir**

**10 wt%**

The ratio identifies the alloy. Specify any impurity limits and material certificate requirements.

## 02 Typical physical properties

These are alloy reference values, not acceptance limits for a finished tube.

| PROPERTY | REFERENCE VALUE | CONDITION / BASIS |
|---|---|---|
| Density | **21.6 g/cm³** | Nominal alloy |
| Melting range | **1780–1800 °C** | Solidus to liquidus |
| Electrical resistivity | **0.25 µΩ·m** | Annealed, 20 °C |

## Specifying a sleeve or electrode tube

For a sleeve that fits over a shaft, identify the mating diameter and critical bore tolerance.
If the part will be crimped, specify the delivery condition and required fit after forming.
For electrode components, identify the contact surface and intended joining method.

PRECISION ROUND TUBING / PRODUCT SPECIFICATION

# Tube Dimensions and Finish

Pt90Ir10 / Custom capillary tubing, cut lengths and sleeves

## 03 Dimensional capabilities

MingQuan's ranges below cover its tubing program. They are not stock sizes or a guarantee for every Pt90Ir10 tube. We confirm the feasible combination against your drawing.

| FEATURE | CAPABILITY | SCOPE |
|---|---|---|
| Outside diameter (OD) | **0.3–20 mm** | Core focus: below 6 mm OD. |
| Wall thickness | **0.015–1.5 mm** | Depends on OD and bore. |
| Tube or component length | **0.8–2000 mm** | Long tubes and cut parts. |
| Inside / outside diameter tolerance | **±0.005 mm** | **Selected capillary sizes only.** |
| Cut-length tolerance | **Typically ±0.1 mm** | Length of short parts only. |

## 04 Surface finish and cut ends

OUTER SURFACE

**Ra ≤ 0.2 µm**

BORE SURFACE

**Ra ≤ 0.6 µm**

Confirm the finish for the specified bore and length. Cut ends are burr-free; visual inspection at 20× checks for obvious surface damage. Call out any specific edge profile on the drawing.

## What to include with your drawing

| | |
|---|---|
| MATERIAL | Pt90Ir10, required delivery condition and material certificate. |
| GEOMETRY | OD, bore, wall, length, critical tolerances and end details. |
| ORDER | Quantity, inspection records and material traceability requirements. |

**sales@mqtubes.com**

For finished radiopaque marker bands, see the separate Marker Bands Product Specifications.