

PLATINUM ALLOYS WIRE / TUBING

Material Data

Platinum alloys are available in the product form as tubes, round wire, shaped wires or coils.

	Pt ASTM B561	PtIr10	PtIr20	PtW8	PtW5
implantable	yes	yes	yes	yes	yes

Chemical Composition

Tungsten				7,0 - 9,0 wt.-%	4,5 - 5,5 wt.-%
Iridium	max. 0,015 wt.-%	9,5 - 10,5 wt.-%	19,0 - 21,0 wt.-%	max. 0,1 wt.-%	max. 0,1 wt.-%
Pd + Rh + Ru	max. 0,08 wt.-%	max. 0,1 wt.-%	max. 0,4 wt.-%	max. 0,4 wt.-%	max. 0,4 wt.-%
other elements	ASTM B561	max. 0,3 wt.-%	max. 0,1 wt.-%	max. 0,5 wt.-%	max. 0,5 wt.-%
Platinum	balance	balance	balance	balance	balance

Physical Properties

Melting Point	1773° C	1780° C	1830° C	1890° C	1830° C
Density	21,45 g/cm ³	21,60 g/cm ³	21,70 g/cm ³	21,30 g/cm ³	20,90 g/cm ³
Modulus of Elasticity	160 x 10 ³ MPa	220x10 ³ MPa	230x10 ³ MPa	230x10 ³ MPa	181x10 ³ MPa
Electrical Resistivity	0,106 μΩm	0,220 μΩm	0,310 μΩm	0,650 μΩm	0,434 μΩm

Mechanical Properties cold worked

Ultimate Tensile Strength	min. 480 MPa	min. 1062 MPa	min. 1439 MPa	min. 1507 MPa	min. 1233 MPa
Elongation	min. 1%	min. 2%	min. 2%	min. 2%	min. 2%

Microstructure in fully annealed condition

Austenitic Grain Size	min. 6	min. 7	min. 7	min. 7	min. 7
-----------------------	--------	--------	--------	--------	--------