

# Platinum Pellets

**Formula:** Pt

**Percentage Purity:** 99.998%

**Maximum Lump Size:** 6mm

**Weight:** 11.2g

**CAS Number:** 7440-06-4

**UOM Code:** 134-817-18

**SKU:** 1000039964-group

**Product Code:** PT00-LP-000103

## Material Properties for Precious Metals

### Atomic Properties

Element	Value
Atomic number	78
Crystal structure	Face centred cubic
Electronic structure	Xe 4f <sup>14</sup> 5d <sup>9</sup> 6s <sup>1</sup>
Valences shown	1,2,3,4
Atomic weight( amu )	195.08
Thermal neutron absorption cross-section( Barns )	9
Photo-electric work function( eV )	5.3
Natural isotope distribution( Mass No./% )	192/ 0.79
Natural isotope distribution( Mass No./% )	196/ 25.30
Natural isotope distribution( Mass No./% )	190/ 0.01
Natural isotope distribution( Mass No./% )	195/ 33.80
Natural isotope distribution( Mass No./% )	198/ 7.20
Natural isotope distribution( Mass No./% )	194/ 32.90
Atomic radius - Goldschmidt( nm )	0.138
Ionisation potential( No./eV )	1/ 9.0
Ionisation potential( No./eV )	2/ 18.6

### Mechanical Properties

Element	Value
Material condition	Hard
Material condition	Soft

<b>Element</b>	<b>Value</b>
Poisson's ratio	0.39
Poisson's ratio	0.39
Bulk modulus( GPa )	276
Bulk modulus( GPa )	276
Tensile modulus( GPa )	170
Tensile modulus( GPa )	170
Hardness - Vickers( kgf mm <sup>2</sup> )	40
Hardness - Vickers( kgf mm <sup>2</sup> )	100
Tensile strength( MPa )	200-300
Tensile strength( MPa )	125-150
Yield strength( MPa )	14-35
Yield strength( MPa )	185

## **Electrical Properties**

<b>Element</b>	<b>Value</b>
Electrical resistivity( $\mu\text{Ohmcm}$ )	10.58@20@20°C
Temperature coefficient( K <sup>-1</sup> )	0.00392@0-100°C

## **Physical Properties**

<b>Element</b>	<b>Value</b>
Boiling point( C )	3827
Density( gcm <sup>3</sup> )	21.45@20°C

## **Thermal Properties**

<b>Element</b>	<b>Value</b>
Melting point( C )	1772
Latent heat of evaporation( J g <sup>-1</sup> )	2405
Latent heat of fusion( J g <sup>-1</sup> )	101
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	133@025°C
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	71.6@0-100°C
Coefficient of thermal expansion( $\times 10^{-6}$ K <sup>-1</sup> )	9@0-100