

# Iridium Pellets Casting Grain

**Formula:** Ir

**Percentage Purity:** 99.9%

**Product Shape:** Casting Grain

**Maximum Lump Size:** 15mm

**Weight:** 2g

**CAS Number:** 7439-88-5

**UOM Code:** 188-857-18

**SKU:** 1000073449-group

**Product Code:** IR00-LP-000100

## Material Properties for Precious Metals

### Atomic Properties

Element	Value
Atomic number	77
Crystal structure	Face centred cubic
Electronic structure	Xe 4f <sup>14</sup> 5d <sup>7</sup> 6s <sup>2</sup>
Valences shown	3, 4
Atomic weight( amu )	192.22
Thermal neutron absorption cross-section( Barns )	425
Photo-electric work function( eV )	4.6
Natural isotope distribution( Mass No./% )	191/ 37.3
Natural isotope distribution( Mass No./% )	193/ 62.7
Atomic radius - Goldschmidt( nm )	0.135

### Mechanical Properties

Element	Value
Material condition	Soft
Material condition	Hard
Poisson's ratio	0.26
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Bulk modulus( GPa )	371
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Tensile modulus( GPa )	528

<b>Element</b>	<b>Value</b>
Tensile modulus( GPa )	528
Hardness - Vickers( kgf mm <sup>2</sup> )	650
Hardness - Vickers( kgf mm <sup>2</sup> )	200-300
Tensile strength( MPa )	550-1100
Tensile strength( MPa )	1200

## **Electrical Properties**

<b>Element</b>	<b>Value</b>
Electrical resistivity( $\mu\text{Ohmcm}$ )	5.1@20@20°C
Superconductivity critical temperature( K )	0.11
Temperature coefficient( K <sup>-1</sup> )	0.0045@0-100°C
Thermal emf against Pt (cold 0C - hot 100C)( mV )	0.65

## **Physical Properties**

<b>Element</b>	<b>Value</b>
Boiling point( C )	4130
Density( gcm <sup>3</sup> )	22.4@20°C

## **Thermal Properties**

<b>Element</b>	<b>Value</b>
Melting point( C )	2410
Latent heat of evaporation( J g <sup>-1</sup> )	3186
Latent heat of fusion( J g <sup>-1</sup> )	135
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	133@25°C
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	147@0-100°C
Coefficient of thermal expansion( $\times 10^{-6}$ K <sup>-1</sup> )	6.8@0-100°C