

# Tellurium Powder

**Formula:** Te

**Percentage Purity:** 99.5%

**Maximum Particle Size:** 75 $\mu$ m

**Weight:** 1000g

**CAS Number:** 13494-80-9

**UOM Code:** 420-619-68

**SKU:** 1000167930-group

**Product Code:** TE00-PD-000110

## Material Properties for Metals

### Atomic Properties

Element	Value
Atomic number	52
Crystal structure	Hexagonal
Electronic structure	Kr 4d <sup>10</sup> 5s <sup>2</sup> 5p <sup>4</sup>
Valences shown	2,4,6
Atomic weight( amu )	127.6
Thermal neutron absorption cross-section( Barns )	4.7
Photo-electric work function( eV )	4.8
Natural isotope distribution( Mass No./% )	124/ 4.6
Natural isotope distribution( Mass No./% )	125/ 7.0
Natural isotope distribution( Mass No./% )	123/ 0.9
Natural isotope distribution( Mass No./% )	126/ 18.7
Natural isotope distribution( Mass No./% )	120/ 0.1
Natural isotope distribution( Mass No./% )	128/ 31.7
Natural isotope distribution( Mass No./% )	122/ 2.5
Natural isotope distribution( Mass No./% )	130/ 34.5
Atomic radius - Goldschmidt( nm )	0.143
Ionisation potential( No./eV )	3/ 28.0
Ionisation potential( No./eV )	4/ 37.4
Ionisation potential( No./eV )	1/ 9.01
Ionisation potential( No./eV )	6/ 70.7
Ionisation potential( No./eV )	5/ 58.8

Element	Value
Ionisation potential( No./eV )	2/ 18.6

## Mechanical Properties

Element	Value
Hardness - Mohs	2.3
Material condition	Polycrystalline
Poisson's ratio	0.16-0.3
Bulk modulus( GPa )	31.4
Tensile modulus( GPa )	47.1

## Electrical Properties

Element	Value
Electrical resistivity( $\mu\text{Ohmcm}$ )	$1.6 \times 10^{-7}$ @ 0-100°C

## Physical Properties

Element	Value
Boiling point( C )	990
Density( $\text{gcm}^{-3}$ )	6.25 @ 20°C

## Thermal Properties

Element	Value
Melting point( C )	450
Latent heat of evaporation( $\text{J g}^{-1}$ )	820
Latent heat of fusion( $\text{J g}^{-1}$ )	138
Specific heat( $\text{J K}^{-1} \text{kg}^{-1}$ )	201 @ 25°C
Thermal conductivity( $\text{W m}^{-1} \text{K}^{-1}$ )	3.3 @ 0-100°C
Coefficient of thermal expansion( $\times 10^{-6} \text{K}^{-1}$ )	16.75 @ 0-100°C