



GENERAL PROPERTIES

Symbol:	Yb
Atomic Number:	70
Atomic Weight:	173.04
Density:	6.965 gm/cc
Melting Point:	819 °C
Boiling Point:	1194 °C
Thermal Conductivity:	0.349 W/cm/°K @ 298.2 °K
Electrical Resistivity:	29.0 microhm-cm @ 25 °C
Electronegativity:	1.1 Paulings
Specific Heat:	0.0346 Cal/g/°K @ 25 °C
Heat of Vaporization:	38 K-Cal/gm atom at 1194 °C
Heat of Fusion:	2.20 Cal/gm mole
Thermal Neutron Cross Section:	36 Barns per Atom
Magnetic Susceptibility:	81 x 10 ⁻⁶ Emu @ Room Temp
Magnetic Moment:	0 Bohr Magnetons
Temperature Coefficient of Resistance:	0.00130 @ 0 °C to Room Temp

MATERIAL OVERVIEW

Characteristics: Metallic luster, quite malleable. Reacts slowly with water. Soluble in dilute acids and liquid ammonia. Low toxicity.

For more information visit the reference library at our web site: <http://www.espi-metals.com>

TEL: 800-638-2581 E-MAIL: sales@espi-metals.com FAX: 800-488-0060

TYPICAL ANALYSES					
Impurities in ppm					
3N					
Ca	<400	Er	<100	Y	<100
Fe	<100	Lu	<100	Si	<100
Al	<100	Tm	<100	Mg	<400
Ni	<100				

ROD

Item Description

Grades

Ytterbium Rod .250"	3N
Ytterbium Rod .500"	3N

Rod is cut to order and sold by the inch or foot.

FOIL

Item Description

Grades

Ytterbium Foil .001" to .009"	3N
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Foil is cut to order and sold by the square inch or square foot.

SHEET

Item Description

Grades

Ytterbium Sheet .010"	3N
Ytterbium Sheet .015"	3N
Ytterbium Sheet .020"	3N
Ytterbium Sheet .030"	3N
Ytterbium Sheet .040"	3N

Sheet stock is cut to order and sold by the square inch or square foot.

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SPUTTERING TARGETS

<u>Item Description</u>	<u>Grades</u>
Ytterbium Sputtering Target 2"D X .125"T	3N
Ytterbium Sputtering Target 2"D X .250"T	3N
Ytterbium Sputtering Target 4"D X .125"T	3N
Ytterbium Sputtering Target 4"D X .250"T	3N
Ytterbium Sputtering Target 5"D X .125"T	3N
Ytterbium Sputtering Target 5"D X .250"T	3N
Ytterbium Sputtering Target 6"D X .125"T	3N
Ytterbium Sputtering Target 6"D X .250"T	3N

Additional sizes available upon request.

For Sputtering Targets produced from Ytterbium compounds see catalog section 'Sputtering Targets'.

POWDER, SHOT, PELLETS, & INGOT

<u>Item Description</u>	<u>Grades</u>
Ytterbium Chips or Ingot	3N
Ytterbium Powder -40 Mesh	3N

Powder, shot, pellets, and ingots are packaged to order and sold by the gram or kilogram.

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COMPOUNDS

<u>Item Description</u>	<u>Grades</u>
Ytterbium Aluminide, YbAl ₂ , 1/4" Pieces by Down	2N5
Ytterbium Boride, YbB ₆ , -325 Mesh	3N
Ytterbium Bromide, YbBr ₃ -xH ₂ O, -60 Mesh	3N
Ytterbium Bromide, YbBr ₃ , -60 Mesh	3N
Ytterbium Chloride, YbCl ₃ -xH ₂ O, -60 Mesh	3N
Ytterbium Chloride, YbCl ₃ , -60 Mesh	3N
Ytterbium Fluoride, YbF ₃ , 1/4" to 1/8" Pieces	3N
Ytterbium Fluoride, YbF ₃ , -60 Mesh	3N
Ytterbium Fluoride, YbF ₃ , -325 Mesh	3N
Ytterbium Hydride, YbH ₂₋₃ , -60 Mesh	3N
Ytterbium Iodide, YbI ₃ -xH ₂ O, -60 Mesh	3N
Ytterbium Iodide, YbI ₃ , -60 Mesh	3N
Ytterbium Nitride, YbN, -60 Mesh	3N

(Continued on Next Page)

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COMPOUNDS

<u>Item Description</u>	<u>Grades</u>	
Ytterbium Oxide, Yb ₂ O ₃ , -325 Mesh	3N	5N
Ytterbium Oxide, Yb ₂ O ₃ , 1/2" to 1/8" Pieces	3N	
Ytterbium Phosphide, YbP, -60 Mesh	2N5	
Ytterbium Selenide, Yb-Se, -100 Mesh	3N	
Ytterbium Silicide, YbSi ₂ , 1/4" Pieces by Down	3N	
Ytterbium Sulfide, Yb ₂ S ₃ , -200 Mesh	3N	
Ytterbium Telluride, Yb-Te, -20 Mesh	3N	

Compounds are packaged to order and sold by the gram or kilogram.

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