



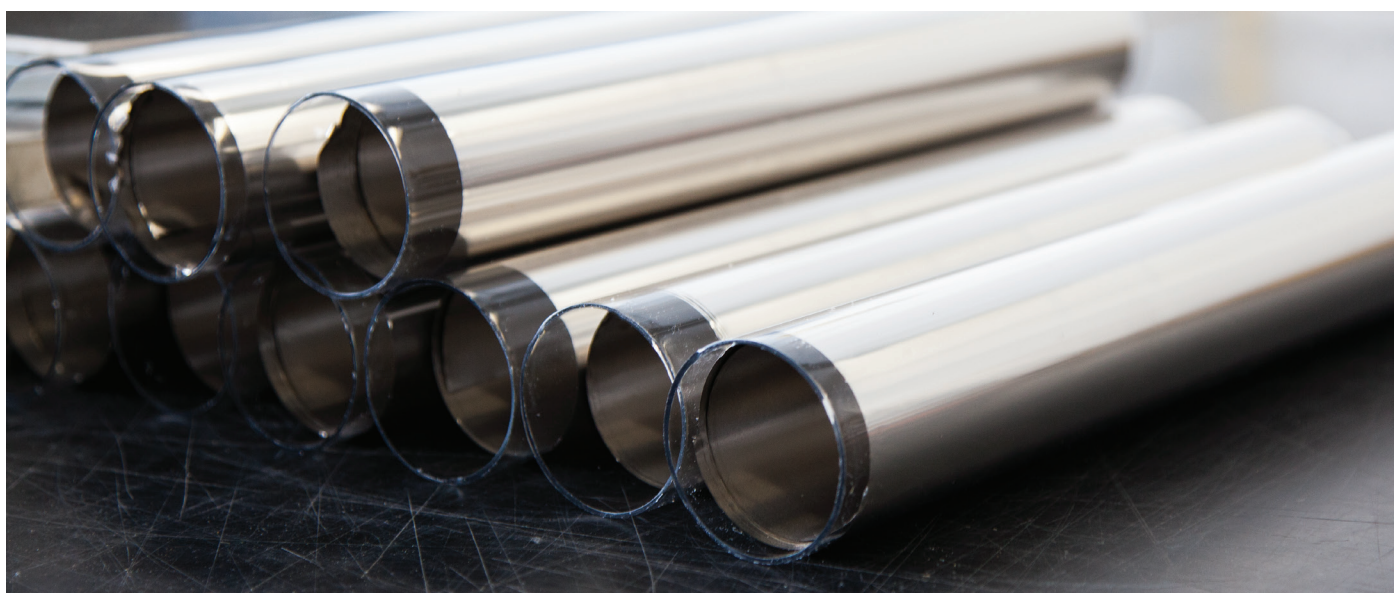
Chemicals

High purity metals and materials

Accelerate your research with the
purity and reliability you can trust

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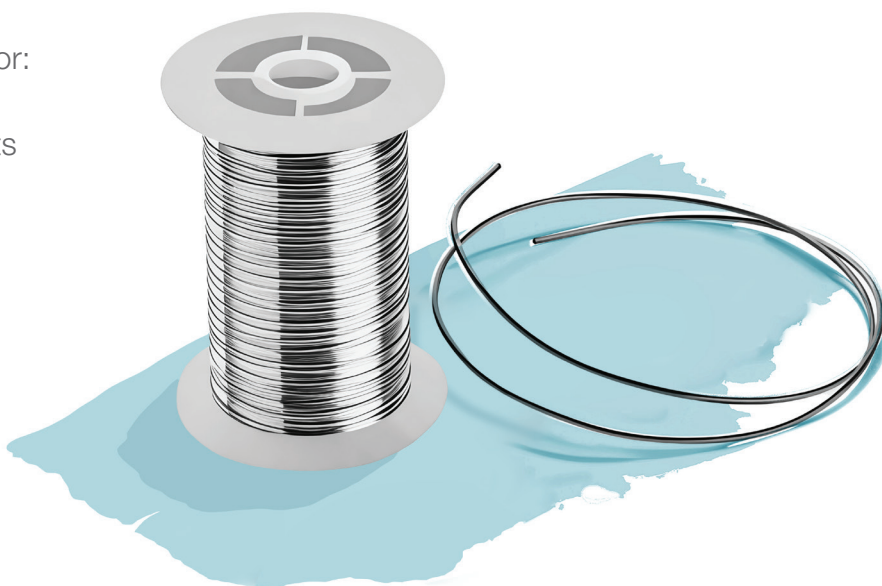
Introduction

Thermo Fisher Scientific offers a broad range of high purity metals and materials, virtually all of which are available from stock for immediate shipment. No matter what your application, we are able to supply pure metals, alloys and non-metallic elements in various purities and forms to meet most specifications. A wide range of resources for manufacturing and fabrication are available to meet most specialty requirements.

In addition to pure elements and alloys, you will find here a variety of forms of carbon, ceramics for high temperature applications, evaporation materials, products for brazing, optics and crystals.

Count on Thermo Fisher Scientific for:

- Highest purity and quality products
- Outstanding delivery and service
- Competitive pricing for large and small quantities



Pure elements

Our broad range of pure elements, from aluminum to zirconium, are designed to meet a wide variety of high technology applications. Different purities and forms are provided to correspond to the demands of many different uses and applications. Representative physical properties and additional facts pertaining to each element are available. Our range of pure elements contains over 1400 products.

A selection of our pure elements can be found in the table below.

Catalog No.	Description
000905	Bromine liquid, 99.8%
010146	Cesium, 99.98% (metals basis)
040317	Gold shot, semi-spherical, 6.35mm (0.25in) & down, Premion™, 99.999% (metals basis)
010195	Gold wire, 0.2mm (0.008in) diam., 99.9% (metals basis)
000261	Platinum foil, 0.127mm (0.005in) thick, 99.9% (metals basis)
010283	Platinum gauze, 52 mesh woven from 0.1mm (0.004in) diam., wire, 99.9% (metals basis)
013374	Platinum slug, 6.35mm (0.25in) diam. x 12.7mm (0.50in) length, Premion™, 99.99+% (metals basis)
011435	Silver wire, 2.0mm (0.08in) diam., annealed, 99.9% (metals basis)
013783	Vanadium foil, 0.127mm (0.005in) thick, 99.8% (metals basis)
010441	Zirconium sponge, 0.8-25.4mm (0.03-1.0in), 99.5%, Zr & Hf

For custom specifications or large quantities, request a quote online

Alloys

We offer a wide variety of alloys in several compositions and forms. Our range of alloys contains over 250 products. Aluminum alloys for use in many industries such as equipment, machinery, vehicles and various specialized applications. Copper alloys are the less expensive option than gold and platinum and provide incomparable heat and thermal performance. Nickel and stainless steel alloys are available and are used widely within the chemical industry.

A selection of our alloys can be found in the table below.

Catalog No.	Description
088322	Aluminum silicon powder, -325 mesh, 99% (metals basis)
045526	Devarda's alloy, granular
012478	Gallium indium eutectic, 99.99% (metals basis)
041032	Silver, solder alloy, 1.6mm (0.06in) dia
000130	Gold wire, 0.127mm (0.005in) dia, Premion™, 99.99% (metals basis)
036683	Iron nickel powder, -325 mesh, 99.5+% (metals basis)
044954	Nitinol foil, 0.38mm (0.015in) thick, superelastic, flat annealed, pickled surface
041582	Stainless steel foil, 0.05mm (0.002in) thick, type 304
011084	Stainless Steel powder, -140 mesh, Type 303-L

For custom specifications or large quantities, request a quote online

Carbon, graphite and ceramics

Our portfolio includes a wide selection of carbon products in a variety of forms, including powder, diamond, fullerene, glassy carbon and graphite. This product range includes over 350 products.

A selection of our carbon, graphite and ceramic products can be found in the table below.

Catalog No.	Description
039724	Carbon black, acetylene, 50% compressed, 99.9+%
043199	Carbon felt, 3.18mm (0.125in) thick, 99.0%
043118	Carbon, activated, -4+8 mesh
013401	Diamond powder, synthetic, <1 micron, 99.9% (metals basis)
046311	Fullerene powder, 99% C ₆₀
038022	Glassy carbon plate, 2mm (0.08in) thick, type 2
037996	Glassy carbon rod, 1mm (0.04in) diam., type 2

For custom specifications or large quantities, request a quote online



Evaporation materials

Our product line consists of a compiled broad representation of the more commonly used materials for evaporating and crystal growing applications. All purities are based on total metallic impurities unless otherwise specified.

All products designated as Thermo Scientific™ Puratronic™ or REacton™ grade are automatically supplied with a Certificate of Analysis (COA). This certificate details elements sought, detection limits and total metallic impurity levels in parts per million. Purities are based on Total Metallic Impurities (TMI). Tolerances for metal are normally +/- 10% of listed value unless specifically identified.

A selection of our evaporation materials can be found in the table below.

Catalog No.	Description
040830	Carbon sputtering target, 76.2mm (3.0in) diam. x 3.18mm (0.125in) thick, 99.999% (metals basis)
039671	Cobalt slug, 6.35mm (0.25in) diam. x 6.35mm (0.25in) length, 99.95% (metals basis)
039675	Copper slug, 6.35mm (0.25in) diam. x 6.35mm (0.25in) length, 99.996% (metals basis)
013394	Gold slug, 3.175mm (0.125in) diam. x 6.35mm (0.25in) length, Premion™, 99.99% (metals basis)
013374	Platinum slug, 6.35mm (0.25in) diam. x 12.7mm (0.50in) length, Premion™, 99.99+% (metals basis)
040419	Platinum slug, 6.35mm (0.25in) diam. x 6.35mm (0.25in) length, 99.95% (metals basis)
013381	Rhodium slug, 99.95% (metals basis)
039670	Tantalum slug, 6.35mm (0.25in) diam. x 6.35mm (0.25in) length, 99.95% (metals basis)
041110	Titanium nitride sputtering target, 50.8mm (2.0in) diam. x 3.18mm (0.125in) thick, 99.5% (metals basis)
043043	Titanium sputtering target, 50.8mm (2.0in) diam. x 6.35mm (0.250in) thick, 99.995% (metals basis)



Labware

Our labware includes precious metal, non-precious metal, PTFE labware, quartz, glassy carbon, and ceramic labware. From crucibles to plates, we offer labware in many different forms.

If your need is for precious metal labware, then trust the precious metal experts the next time you need the tolerance of platinum or other precious metal labware. Our labware is competitively priced on a daily basis and standard items are in stock for immediate shipment.

Only a few metals are required to produce a wide array of durable labware. The basic noble metals group consists of platinum, rhodium, ruthenium, osmium, palladium, iridium, gold and silver. Ruthenium and osmium, however, are unworkable in their pure form and are only offered under special circumstances.

A selection of our labware products can be found in the table below.

Catalog No.	Description
035904	High form nickel crucible, cap 30 ml, top diam. 41 mm, bottom diam. 25mm, depth 43mm
036056	Low form inconel crucible, cap. 100ml, top diam. 59mm, bottom diam. 50mm, depth 46mm
035947	Low form zirconium crucible, cap. 35ml, top diam. 46mm, bottom diam. 38mm, depth 30mm
046865	Non-wetting Pt 5% Au crucible, top dia 37.5mm, bottom diam. 22.5mm, Ht 41mm, base thickness 0.30mm, cap. 30m
046988	Non-wetting Pt 5% Au crucible with RF rim, top diam. 29mm, bottom diam. 17.5mm, Ht 24mm, base thickness 0.25mm, cap. 10ml
046569	Platinum Fischer cathode mesh cylinder w/out rings on stem, cyl. diam. 45mm, Ht 45mm, overall Ht 150mm, S.A.125cm ²
036097	Straight wall zirconium crucible, cap. 250ml, outside diam. 82mm, depth 59mm
035992	Straight wall zirconium crucible, cap. 35ml, outside diam. 46mm, depth 29mm

For custom specifications or large quantities, request a quote online



Interactive periodic table

Use our interactive periodic table to view our complete portfolio of pure elements.
Click on chemical symbols to view the full list of products and technical information.

H 1 Hydrogen 1.008																	He 2 Helium 4.003	
Li 3 Lithium 6.941	Be 4 Beryllium 9.012											B 5 Boron 10.811	C 6 Carbon 12.011	N 7 Nitrogen 14.007	O 8 Oxygen 16.000	F 9 Fluorine 18.998	Ne 10 Neon 20.180	
Na 11 Sodium 22.990	Mg 12 Magnesium 24.305											Al 13 Aluminum 26.982	Si 14 Silicon 28.086	P 15 Phosphorus 30.974	S 16 Sulfur 32.060	Cl 17 Chlorine 35.453	Ar 18 Argon 39.948	
K 19 Potassium 39.100	Ca 20 Calcium 40.078	Sc 21 Scandium 44.956	Ti 22 Titanium 47.880	V 23 Vanadium 50.942	Cr 24 Chromium 52.004	Mn 25 Manganese 54.938	Fe 26 Iron 55.845	Co 27 Cobalt 58.933	Ni 28 Nickel 58.693	Cu 29 Copper 63.546	Zn 30 Zinc 65.380	Ga 31 Gallium 69.723	Ge 32 Germanium 72.630	As 33 Arsenic 74.922	Se 34 Selenium 78.972	Br 35 Bromine 79.904	Kr 36 Krypton 83.800	
Rb 37 Rubidium 85.468	Sr 38 Strontium 87.620	Y 39 Yttrium 88.906	Zr 40 Zirconium 91.224	Nb 41 Niobium 92.906	Mo 42 Molybdenum 95.940	Tc 43 Technetium 98.000	Ru 44 Ruthenium 101.070	Rh 45 Rhodium 102.905	Pd 46 Palladium 106.420	Ag 47 Silver 107.868	Cd 48 Cadmium 112.411	In 49 Indium 114.818	Sn 50 Tin 118.710	Sb 51 Antimony 121.757	Te 52 Tellurium 127.603	I 53 Iodine 126.905	Xe 54 Xenon 131.294	
Cs 55 Caesium 132.905	Ba 56 Barium 137.327	Lanthanides		Hf 72 Hafnium 178.490	Ta 73 Tantalum 180.948	W 74 Tungsten 183.840	Re 75 Rhenium 186.207	Os 76 Osmium 190.230	Ir 77 Iridium 192.222	Pt 78 Platinum 195.084	Au 79 Gold 197.000	Hg 80 Mercury 200.590	Tl 81 Thallium 204.383	Pb 82 Lead 207.200	Bi 83 Bismuth 208.980	Po 84 Polonium 209	At 85 Astatine 210	Rn 86 Radon 222
Fr 87 Francium (223)	Ra 88 Radium (226)	Actinides		Rf 104 Rutherfordium (261)	Db 105 Dubnium (268)	Sg 106 Seaborgium (269)	Bh 107 Bohrium (270)	Hs 108 Hassium (277)	Mt 109 Meitnerium (276)	Ds 110 Darmstadtium (281)	Rg 111 Roentgenium (281)	Cn 112 Copernicium (285)	Nh 113 Nihonium (286)	Fl 114 Flerovium (289)	Mc 115 Moscovium (289)	Lv 116 Livermorium (293)	Ts 117 Tennessine (294)	Og 118 Oganesson (294)
Key		La 57 Lanthanum 138.905	Ce 58 Cerium 140.120	Pr 59 Praseodymium 140.908	Nd 60 Neodymium 144.240	Pm 61 Promethium 145	Sm 62 Samarium 150.360	Eu 63 Europium 152.000	Gd 64 Gadolinium 157.250	Tb 65 Terbium 158.925	Dy 66 Dysprosium 162.500	Ho 67 Holmium 164.930	Er 68 Erbium 167.260	Tm 69 Thulium 168.930	Yb 70 Ytterbium 173.040	Lu 71 Lutetium 175.000		
		Ac 89 Actinium (227)	Th 90 Thorium 232.038	Pa 91 Protactinium 231.036	U 92 Uranium 238.029	Np 93 Neptunium (237)	Pu 94 Plutonium (244)	Am 95 Americium (243)	Cm 96 Curium (247)	Bk 97 Berkelium (247)	Cf 98 Californium (251)	Es 99 Einsteinium (252)	Fm 100 Fermium (257)	Md 101 Mendelevium (258)	No 102 Nobelium (259)	Lr 103 Lawrencium (262)		

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Aluminum (Al)

Pure aluminum ([Ne]3s²3p¹) (CAS 7429-90-5) is light, nontoxic, nonmagnetic, and nonsparking. It can be easily formed, machined, or cast. This silvery-white metal has high thermal conductivity and excellent corrosion resistance. Aluminum is the most abundant metal in the earth's crust. It ranks second among metals on the scale of malleability and sixth in ductility.

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- Aluminum ingot, 99.999% (metals basis)
This Thermo Scientific Chemicals brand product was originally part of the Alfa Aesar product portfolio. Some documentation and label information may refer to the legacy brand. The original Alfa Aesar product / item code or SKU reference has not changed.
Pricing & Availability
- Aluminum foil, 1.0mm (0.04in) thick, Puratronic™, 99.998% (metals basis)
This Thermo Scientific Chemicals brand product was originally part of the Alfa Aesar product portfolio. Some documentation and label information may refer to the legacy brand. The original Alfa Aesar product / item code or SKU reference has not changed.
Pricing & Availability

Glossary of elemental forms available online



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