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thermo scientific

Chemicals

Thermo Scientific gold products

an exceptional precious metal

Thermo Scientific gold products

Probably the first pure metal known to man, gold has been highly valued from earliest times. It is a yellow, malleable, ductile, and soft metal, often alloyed to give it more strength. Gold is a good conductor of heat and electricity and is resistant to oxidation and most reagents. Extremely light reflective, it is an excellent reflector particularly of infrared. The freezing point of gold serves as a calibration point for the International Temperature Scales.

Our specialized gold compounds are available in catalog sizes to bulk quantities. We offer the capability to produce batch sizes up to 200 kg. Bulk packing sizes are customized to meet our customers' requirements.

Key Features

- Large selection of gold compounds can be manufactured up to a purity of 99.999%
- Most other gold products are manufactured to 99.9% purity as standard
- A batch specific certificate of analysis is produced for each product
- Each gold product batch has:
  - Full metallic impurities typically measured by ICP-MS to ppm
  - Measured gold content
- Specialized gold compounds outside our catalog range can be manufactured on request

Application highlights

Gold nanoparticles (GNP) in medicine

Headline-making applications of gold nanoparticles include: diagnosis of cancers, heart diseases, and infections; medical procedures and treatments such as drug delivery, gene therapy, photodynamic therapy and radiotherapy dose enhancement.

Gold in medical devices

Small amounts of gold are used in surgical instruments, electronic equipment, and life-support devices. Radioactive gold can be implanted in tissues as a radiation source to treat specific cancers, and when injected with a colloidal solution, it functions as a beta emitter that travels through the body to aid in diagnosis.

Gold nanoparticles (GNP) in drug discovery

Gold nanoparticles are being used in the development of a new generation of broad-spectrum antiviral drugs and as an antibiotic, antifungal, and antimicrobial agent when added in plastics, coatings, nanofibers and textiles. Nanoparticles cross-linked with collagen gels are also being developed to treat ageing or damaged skin.

Gold in chemistry

Supported gold catalysts are used in a wide range of chemical reactions, including: carbonmonoxide oxidation, catalytic combustion of hydrocarbons, hydrochlorination of ethyne, hydrogen peroxide formation, oxidation of glucose to gluconic acid, oxidative decomposition of dioxins, ozone decomposition, NOx reduction, epoxidation of olefins, and hydrogenation of alkynes. Gold alloy catalysts are used in the commercial production of vinyl acetate monomer (VAM).

Gold in technology

Gold in one or the other elemental form is used in the mounting of microprocessors, in memory chips, as connectors used to attach cables, as well as in GPS systems, calculators, and fuel cell applications. Gold nanoparticles are being explored for use as sensory probes, electronic conductors, and organic photovoltaics.

Gold in space

Pure gold in one or the other form is used in space vehicle circuitry, as a lubricant between vehicle parts, and as a radiation reflector for stabilizing the temperature inside the space vehicle.

The Thermo Scientific™ portfolio includes an extensive range of specialized gold products, with over 70 products available and the capability to produce large batch sizes. Below is a listing of some of our products. The full product listing is available online.

Thermo Scientific gold products

Pure gold products

VWR Cat. No.	Description	Size
AA11519-FF	Gold foil, 0.025mm (0.001in) thick, 99.95% (metals basis)	25 × 25 mm, 50 × 50mm, 100 × 100mm
AA00133-FF	Gold foil, 0.025mm (0.001in) thick, Premion®, 99.985% (metals basis)	25 × 25 mm, 50 × 50 mm
AA43071-FF	Gold foil, 0.05mm (0.002in) thick, 99.95% (metals basis)	25 × 25 mm, 50 × 50 mm, 100 × 100 mm
AA11391-FF	Gold foil, 0.1mm (0.004in) thick, Premion™, 99.9975+% (metals basis)	25 × 25 mm, 50 × 50 mm, 100 × 100 mm
AA44164-FF	Gold foil, 0.5mm (0.02in) thick, Premion™, 99.999% (metals basis)	25 × 25 mm, 50 × 50 mm
AA11388-FF	Gold foil, 1.0mm (0.04in) thick, Premion™, 99.9985% (metals basis)	25 × 25 mm
AA40586-FF	Gold gauze, 82 mesh woven from 0.06mm (0.0025in) dia wire, 99.9% (metals basis)	25 × 25 mm, 50 × 50 mm
AA36451-BS	Gold Nickel wire, 0.5mm (0.02in) dia, annealed, 99.85% (metals basis)	10 cm, 50 cm, 1 m
AA41206-BU	Gold Palladium wire, 0.2mm (0.008in) dia, annealed, 99.9% (metals basis)	25 cm, 50 cm, 1 m
AA42307-AK	Gold plating solution, electroless, metal content ≈3.7g/l	250 mL, 1 L
AA10612-03	Gold powder, -20 mesh, Premion™, 99.99% (metals basis)	1 g, 5 g
AA00136-03	Gold powder, -20+100 mesh, Premion™, 99.995% (metals basis)	1 g, 5 g
AA14641-03	Gold powder, -60 mesh, Premion™, 99.99% (metals basis)	1 g, 5 g
AA00765-03	Gold powder, spherical, <5 micron, 99.95% (metals basis)	1 g, 5 g
AA43901-03	Gold powder, spherical, -200 mesh, 99.9% (metals basis)	1 g, 5 g
AA44636-03	Gold powder, spherical, APS 0.5-0.8 micron, 99.96+% (metals basis)	1 g, 5 g, 250 mg
AA39817-03	Gold powder, spherical, APS 0.8-1.5 micron, 99.96+% (metals basis)	1 g, 5 g, 250 mg
AA39818-03	Gold powder, spherical, APS 1.5-3.0 micron, 99.96+% (metals basis)	1 g, 5 g, 250 mg
AA42674-03	Gold powder, spherical, APS 3.0-5.5 micron, 99.96+% (metals basis)	1 g, 5 g
AA42675-03	Gold powder, spherical, APS 5.5-9.0 micron, 99.96+% (metals basis)	1 g, 5 g
AA11355-03	Gold shot, 0.8-6mm (0.03-0.2in), Premion™, 99.999% (metals basis)	1 g, 5 g
AA12233-03	Gold shot, semi-spherical, 6.35mm (0.25in) & down, 99.95% (metals basis)	1 g, 5 g
AA13394-KG	Gold slug, 3.175mm (0.125in) dia × 6.35mm (0.25in) length, Premion™, 99.99% (metals basis)	1 pc, 5 pc, 25 pc
AA44139-FF	Gold Thinfoil, 0.007mm (0.00028in) thick, 99.9% (metals basis)	25 × 25 mm, 50 × 50 mm
AA11518-FF	Gold Thinfoil, 0.01mm (0.0004in) thick, 99.9% (metals basis)	25 × 25 mm, 50 × 50 mm, 100 × 100 mm
AA43149-FF	Gold Ultrathin foil, 1.0 micron thick, 99.9% (metals basis)	25 × 25 mm
AA14353-KS	Gold wire, 0.0127mm (0.0005in) dia, 4.88m (16ft), 99.9% (metals basis)	1 each
AA40585-G1	Gold wire, 0.025mm (0.001in) dia, annealed, 99.95% (metals basis)	1 m, 5 m, 20 m
AA10969-G5	Gold wire, 0.05mm (0.002in) dia, Premion™, 99.995% (metals basis)	5 m, 25 m, 100 m
AA00130-0K	Gold wire, 0.127mm (0.005in) dia, Premion™, 99.99% (metals basis)	0.5 m, 2 m, 10 m
AA14727-G1	Gold wire, 0.1mm (0.004in) dia, 99.95% (metals basis)	1 m, 5 m, 25 m
AA10968-G1	Gold wire, 0.1mm (0.004in) dia, Premion™, 99.998% (metals basis)	1 m, 5 m, 25 m
AA00725-G1	Gold wire, 0.25mm (0.01in) dia, 99.9% (metals basis)	1 m, 5 m
AA14724-BU	Gold wire, 0.25mm (0.01in) dia, 99.95% (metals basis)	25 cm, 100 cm, 500 cm
AA45567-BU	Gold wire, 0.25mm (0.01in) dia, annealed, Premion™, 99.999% (metals basis)	25 cm, 100 cm, 500 cm
AA10967-BU	Gold wire, 0.25mm (0.01in) dia, Premion™, 99.998% (metals basis)	25 cm, 100 cm, 500 cm
AA14730-BU	Gold wire, 0.25mm (0.01in) dia, Premion™, 99.999% (metals basis)	25 cm, 100 cm, 500 cm

VWR Cat. No.	Description	Size
AA10195-G1	Gold wire, 0.2mm (0.008in) dia, 99.9% (metals basis)	1 m, 5 m
AA45084-BU	Gold wire, 0.35mm (0.0138in) dia, Premion™, 99.999% (metals basis)	25 cm, 100 cm, 500 cm
AA14728-BS	Gold wire, 0.5mm (0.02in) dia, 99.95% (metals basis)	10 cm, 50 cm, 250 cm
AA47160-BS	Gold wire, 0.5mm (0.02in) dia, annealed, Premion™, 99.999% (metals basis)	10 cm, 50 cm, 250 cm
AA10966-BQ	Gold wire, 0.5mm (0.02in) dia, Premion™, 99.9985% (metals basis)	5 cm, 25 cm, 100 cm, 250 cm
AA14725-BS	Gold wire, 0.5mm (0.02in) dia, Premion™, 99.999% (metals basis)	10 cm, 50 cm, 250 cm
AA38379-BS	Gold wire, 0.762mm (0.030in) dia, Premion™, 99.999% (metals basis)	10 cm, 50 cm
AA14731-BP	Gold wire, 1.0mm (0.04in) dia, 99.95% (metals basis)	2 cm, 10 cm, 50 cm
AA10965-BP	Gold wire, 1.0mm (0.04in) dia, Premion™, 99.9985% (metals basis)	2 cm, 10 cm, 50 cm
AA14726-BP	Gold wire, 1.0mm (0.04in) dia, Premion™, 99.999% (metals basis)	2 cm, 10 cm, 50 cm
AA40329-BS	Gold wire, 14kt, yellow, 1.63mm (0.064in) dia, Au 58.3% min	10 cm, 25 cm, 50 cm
AA14729-BO	Gold wire, 2.0mm (0.08in) dia, 99.95% (metals basis)	1 cm, 5 cm, 25 cm
AA14733-BO	Gold wire, 2.0mm (0.08in) dia, Premion™, 99.999% (metals basis)	1 cm, 5 cm, 25 cm

Full product listing is available online.

Gold compounds

VWR Cat. No.	Description	Size
AA41002-03	Bromo(triphenylphosphine)gold(I), Premion™, 99.99% (metals basis)	1 g, 5 g
AA41007-02	Chloro(triphenylphosphine)gold(I), Premion™, 99.99% (metals basis), Au 39.3% min	0.5 g, 1 g, 5 g
AA43365-03	Gold(I) chloride, 99.9% (metals basis)	1 g, 5 g
AA40432-01	Gold(I) chloride, Premion™, 99.99% (metals basis), Au 84.2% min	0.25 g, 1 g, 5 g
AA16617-03	Gold(I) iodide, 99%	1 g, 5 g
AA12552-03	Gold(I) potassium cyanide, Premion™, 99.96% (metals basis), Au 67.6% min	1 g, 5 g
AA39741-03	Gold(I) sodium thiosulfate hydrate, 99.9% (metals basis)	1 g, 5 g, 25 g
AA39742-02	Gold(III) acetate, 99.9% (metals basis)	0.5 g, 1 g, 5 g
AAA19514-03	Gold(III) bromide, 99%	1 g, 5 g
AA12162-03	Gold(III) bromide, Premion™, 99.99% (metals basis), Au 44.6% min	1 g
AA43360-03	Gold(III) chloride, Premion™, 99.99% (metals basis), Au 64.4% min	1 g, 5 g
AA12159-03	Gold(III) hydroxide, Au 79% min	1 g, 5 g, 10 g
AA12161-01	Gold(III) oxide, Premion™, 99.99% (metals basis), Au 88.6% min	0.25 g, 1 g, 5 g

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