



Chemicals

Thermo Scientific silver products

an exceptional precious metal

Thermo Scientific silver products

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Ag

Silver truly packs a punch given its unique combination of intrinsic antimicrobial properties, high electric conductivity and ductility. This combined with the commitment to quality and delivery means the Thermo Scientific™ portfolio of silver products have been used extensively in a wide range of applications from medical and pharmaceutical to catalysis, energy and advanced optoelectronics that touch everyday life.

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



Application highlights

Chemical

Many silver salts are the chemical precursors for other silver derivatives or metallic silver. Silver carbonate has been employed in the Koenigs-Knorr reaction, a substitution reaction of a glycosyl halide with an alcohol to give a glycoside.

Silver salts of carboxylic acids are used to produce organic halides (Hunsdiecker reaction). Silver products also play a critical role in the catalysis of chemical manufacturing processes that provide the building blocks for many day-to-day products.

Pharmaceutical

The medicinal properties of silver salts have been used in a range of pharmaceutical compositions. Silver staining is a key application in histology for studying proteins and nucleic acids.

Medical and medical devices

Silver and silver salts have been used extensively throughout history for a variety of medical purposes. Silver in many forms including silver sulfate, silver acetate, silver nitrate and nano silver are used in sterile dressings, wound treatment, surgical



Water purification and treatment

Whether for filtration or industrial applications, such as pools, silver products are used to prevent bacterial build up and disinfect water.

Energy

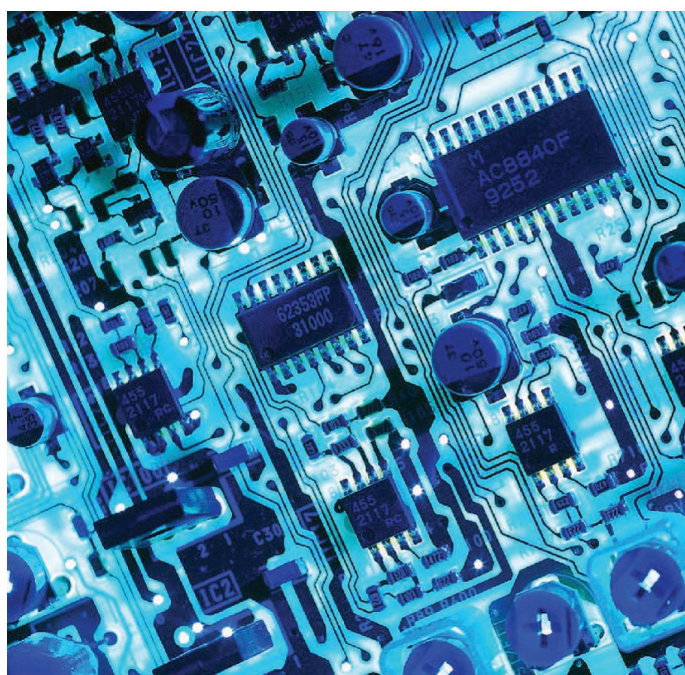
From photovoltaics and fuel cells to silver zinc and silver oxide batteries used in small devices and wearables to large scale missile applications, silver products provide high energy density and greener options.

Electronics

Silver products are superior for bondability, solderability and are corrosion resistant. Given their durability and high conductivity silver products are used in electrical contacts and printable electronics for mobile devices, automotive and displays.

Electrodes for potentiometric measurement

For potentiometric measurement, silver/silver chloride electrodes are used as a matter of choice.



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The Thermo Scientific portfolio includes an extensive range of specialized silver 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.

Pure Silver products

VWR Cat. No.	Description	Size
ALFA40511	Silver casting grain, 1.6-6.35mm (0.063-0.25in), 99.9% (metals basis)	25 g, 100 g, 250 g
ALFA42469	Silver conductive adhesive paste	15 g
ALFA44075	Silver conductive adhesive paste	50 g
ALFA12190	Silver foil, 0.025mm (0.001in) thick, annealed, 99.95% (metals basis)	150 × 150 mm, 150 × 600 mm
ALFA00501	Silver foil, 0.075mm (0.003in) thick, hard, 99.95% (metals basis)	25 × 150 mm, 150 × 150 mm
ALFA11440	Silver foil, 0.127mm (0.005in) thick, annealed, 99.9% (metals basis)	50 × 50 mm, 100 × 100 mm, 200 × 200 mm
ALFA42317	Silver foil, 0.1mm (0.004in) thick, annealed, Premion™, 99.998% (metals basis)	50 × 50 mm, 100 × 100 mm, 100 × 500 mm
ALFA40935	Silver gauze, 50 mesh woven from 0.0764mm (0.003in) dia wire	75 × 75 mm, 150 × 150mm, 300 × 300 mm
ALFA40936	Silver gauze, 80 mesh woven from 0.115mm (0.0045in) dia wire, 99.9% (metals basis)	25 × 25 mm, 75 × 75 mm, 150 × 150 mm, 300 × 300 mm
ALFA39697	Silver needles, 99.999% (metals basis)	10 g, 50 g
ALFA00690	Silver powder, -100 mesh, 99.95% (metals basis)	25 g, 100 g
ALFA11402	Silver powder, APS 4-7 micron, 99.9% (metals basis)	10, 50 g, 250 g
ALFA00678	Silver powder, spherical, -325 mesh, 99.9% (metals basis)	10 g, 50 g
ALFA11436	Silver shot, 1-5mm (0.04-0.2in), 99.9% (metals basis)	10 g, 50 g, 250 g
ALFA12186	Silver shot, 1-5mm (0.04-0.2in), Premion™, 99.99% (metals basis)	10 g, 50 g, 250 g
ALFA11357	Silver shot, 1-7mm (0.04-0.1in), Premion™, 99.999% (metals basis)	10, 50 g, 250 g
ALFA14153	Silver shot, 2-3mm (0.08-0.12in), Premion™, 99.999% (metals basis)	10, 50 g, 250 g
ALFA14259	Silver tubing, 6.35mm (0.25in) OD, 4.35mm (0.171in) ID, 99.9% (metals basis)	10 cm, 50 cm, 4 × 50 cm
ALFA41454	Silver wire, 0.127mm (0.005in) dia, hard, 99.9% (metals basis)	25 m, 100 m
ALFA12187	Silver wire, 0.25mm (0.01in) dia, annealed, 99.9% (metals basis)	25 m, 100 m, 500 m
ALFA11433	Silver wire, 0.5mm (0.02in) dia, 1/2 hard, 99.9% (metals basis)	2 m, 10 m, 50 m
ALFA41390	Silver wire, 0.5mm (0.02in) dia, annealed, 99.9% (metals basis)	2 m, 10 m, 50 m
ALFA11469	Silver wire, 0.5mm (0.02in) dia, Premion™, 99.9985% (metals basis)	1 m, 5 m, 25 m
ALFA11434	Silver wire, 1.0mm (0.04in) dia, annealed, 99.9% (metals basis)	1 m, 5 m, 25 m
ALFA11466	Silver wire, 1.0mm (0.04in) dia, Premion™, 99.999% (metals basis)	50 cm, 2.5 m, 10 m
ALFA11435	Silver wire, 2.0mm (0.08in) dia, annealed, 99.9% (metals basis)	50 cm, 2.5 m, 10 m
ALFA11465	Silver wire, 2.0mm (0.08in) dia, Premion™, 99.999% (metals basis)	25 cm, 100 cm, 500 cm
ALFA42860	Silver wool, 99.9+% (metals basis)	1 g, 5 g, 25 g

Full product listing is available online.

Silver compounds

VWR Cat. No.	Description	Size
ALFA11660	Silver acetate, anhydrous, 99%	25 g, 100 g
ALFA46784	Silver bis(trifluoromethylsulfonyl)imide	250 mg, 1 g, 5 g
ALFA11420	Silver carbonate, 99.5% (metals basis)	25 g, 100 g
ALFA11421	Silver chloride, 99.9% (metals basis)	25 g, 100 g, 500 g
ALFA10857	Silver chloride, Premion™, 99.997% (metals basis)	5 g, 25 g, 100 g
ALFA11538	Silver hexafluoroantimonate, 99%	1 g, 5 g, 25g
ALFA11873	Silver hexafluorophosphate, 98%	1g , 5 g, 25 g
ALFA11419	Silver iodide, 99.9% (metals basis)	25 g, 100 g
ALFA20835	Silver lactate	10 g, 50 g
ALFA45509	Silver nanopowder, APS 20-40nm, 99.9% (metals basis)	5 g, 25 g
ALFA43087	Silver nitrate, Premion™, 99.995% (metals basis), Ag 63% min	5 g, 25 g, 100 g
ALFA10858	Silver nitrate, Premion™, 99.9995% (metals basis)	5 g, 25 g, 100 g
ALFA42209	Silver perchlorate, anhydrous	5 g, 25 g, 100 g
ALFA41443	Silver sulfate, Premion™, 99.99% (metals basis), Ag 68.9% min	25 g, 100 g
ALFA12112	Silver sulfate, Premion™, 99.999% (metals basis)	5 g, 25 g, 100 g
ALFA11416	Silver sulfide, 99%	5 g, 25 g, 100 g
ALFA12113	Silver sulfide, Premion™, 99.995% (metals basis)	5 g, 25 g
ALFA11539	Silver tetrafluoroborate, 99%	10 g, 50 g
ALFA13933	Silver trifluoroacetate, 98%	5 g, 25 g
ALFA88722	Silver trifluoromethanesulfonate, 98%	2 g, 10 g, 50 g
ALFA45496	Silver(I) citrate hydrate	5 g, 25 g, 100 g
ALFA11609	Silver(I) fluoride, 98%	5 g, 25 g
ALFA42577	Silver(I) oxide, 99.99% (metals basis)	1 g, 5 g, 25 g, 4 × 25 g
ALFA11407	Silver(I) oxide, 99+% (metals basis)	25 g, 100 g, 500 g
ALFA43268	Silver(I) oxide, Electrical Grade	250 g, 1 kg
ALFA11610	Silver(II) fluoride, 98+%	2 g, 10 g, 50 g
ALFA22695	Silver(II) oxide, 98%	5 g, 25 g, 100 g
ALFA40187	Silver(II) oxide, 99.9% (metals basis), Ag 86.6% min	5 g, 25 g, 100 g

Full product listing is available online.

