



A constant flow of innovation
for battery technology

Battery Technology

All batteries are made up of three major components: a negative electrode (Anode), a positive electrode (cathode) and an electrolyte, a substance that reacts chemically with the anode and cathode. Metals, metal oxides, and solvents are all essential in battery production. Thermo Fisher Scientific offers a range of quality products to support battery research and manufacturing.

Platinum labware

VWR Cat. No.	Description	Available Sizes
AA39724-18	Carbon black, acetylene, >99.9%	50g, 250g, 1kg, 3kg
AA45527-30	Carbon black, acetylene, 100% compressed, >99.9%	250g, 2x500g
AAH30253-14	Carbon black, Super P™ Conductive, 99+% (metals basis)	25g, 100g
AA46311-MD	Fullerene powder, 99% C60	250mg, 1g, 5g
AA11155-06	Germanium(IV) oxide, Puratronic™, 99.999%	5g, 25g, 100g
AA10510-06	Germanium(IV) oxide, White powder/flake/crystalline/beads, etc., 99.9999%	5g, 25g, 100g
AA40798-TA	Graphite powder, synthetic, conducting grade, -325 mesh, 99.9995% (metals basis)	28g, 113g, 227g, 454g
AA10769-14	Lithium foil, 0.75mm (0.03in)thick × 19mm (0.75in) wide, 99	25g
AA89709-30	Silicon(IV) oxide, 99.8% (metals basis)	250g, 1kg, 5kg
AA88777-14	Silicon(IV) oxide, 99.995% (metals basis)	25g, 100g
AA10856-14	Silicon(IV) oxide, Puratronic™ 99.999% (metals basis)	25g, 100g
AA12283-22	Tin(IV) oxide, 99.9% (metals basis)	100g, 500g, 2kg
AA10760-18	Zinc shot, 1-6mm (0.04-0.24in), Puratronic™ 99.9999% (metals basis)	50g, 250g, 500g, 1kg
AA46545	Platinum Shoniger Basket, Dia 7mm, Ht 20mm, overall Ht 70mm	1 each
AA46520	Platinum standard form crucible, Top OD 32.5mm, Bot Dia 18mm, Ht 36mm, Base Thickness 0.3mm, Capacity 20mL	1 each

Binders

VWR Cat. No.	Description	Available Sizes
AAL04280-22	Acrylic acid, 99%, stab. with ca 200ppm 4-methoxyphenol	100g, 500g
AAJ61887-22	Alginate sodium salt, high viscosity	100g, 250g, 1kg

Cathodes

VWR Cat. No.	Description	Available Sizes
AA14049-18	Lithium cobalt(III) oxide, 97%	50g, 250g, 1kg
AA42090-14	Lithium cobalt(III) oxide, 99.5% (metals basis)	25g, 100g
AA40250-14	Lithium manganese(III,IV) oxide, 99.5% (metals basis)	25g, 100g
AA12839-04	Lithium sulfide, 99.9% (metals basis)	2g, 10g, 50g, 250g
AA10755-09	Sulfur pieces, 99.99% (metals basis), Puratronic™	10g, 50g, 250g
AA43766-36	Sulfur powder, 99.5%	500g, 2kg
AA10343-14	Sulphur Pieces, Puratronic™, 99.9995% (metals basis)	25g, 100g, 500g
AA33394-36	Sulphur Powder, sublimed, -100 mesh, 0.995	500g, 2kg
AA44263-30	Zinc oxide, 99.9% (metals basis)	250g, 1kg, 5kg

Electrolytes

VWR Cat. No.	Description	Available Sizes
AA13408-22	Lithium bromide, anhydrous, 99% min	100g, 500g, 2500g
AA13407-14	Lithium hydroxide, anhydrous, 98%	25g, 100g, 500g
AA13405-14	Lithium nitrate, anhydrous, 99%	25g, 250g, 1kg, 5kg
AA10804-09	Manganese(II) chloride tetrahydrate, Puratronic™, 99.999% (metals basis)	10g, 50g
AAA16199-AD	Potassium hydroxide, flake, 85%	500g, 2500g, 10000g
AAA10552-30	Sodium bromide, 99+% (dry wt.), water <1.0%	250g, 1000g, 5000g

Interstitials

VWR Cat. No.	Description	Available Sizes
AAH27307-09	Lithium bis(trifluoromethylsulfonyl)imide, 98+%	10g, 50g
AA11529-03	Lithium hexafluorophosphate, 98%	1g, 10g, 50g
AA11528-09	Lithium tetrafluoroborate, 98%	10g, 50g
AA42180-VA	Nafion® N-117 membrane, 0.180mm thick, ≥0.90 meq/g exchange capacity	15×15cm, 30×30cm
AA42179-VA	Nafion® N-115 membrane, 0.125mm thick, ≥0.90 meq/g exchange capacity	15×15cm, 30×30cm, 60×60cm
AAA10239-22	Polyethylene powder, low density, 500 micron	100g, 500g, 2500g
AA45176-HB	Polyethylene sheet, High Density, 12.7mm (0.5 in.) thick	300×300mm
AA45175-HB	Polyethylene sheet, Low Density, 3.18mm (0.125 in.) thick	300×300mm
AA45197-HB	Polyethylene sheet, Low Density, 6.35mm (0.25 in.) thick	300×300mm
AA45196-HB	Polypropylene sheet, 3.18mm (0.125mm) thick	300×300mm

Metals- Battery Components

VWR Cat. No.	Description	Available Sizes
AA44332-FI	Aluminum foil, 0.5mm (0.02 in.) thick, annealed, Puratronic™, 99.9999%	50×50mm, 100×100mm, 100×500mm
AA40707-YD	Aluminum Ultrathin foil, 0.8 micron thick, 99.1% (metals basis)	30×30mm, 140×140mm
AA43424-FI	Aluminum foil, 0.25mm (0.01 in.) thick, annealed, Puratronic™, 99.9995% (metals basis)	50×50mm, 100×100mm, 100×500mm
AA42189-FI	Copper foil, 99.999% (metals basis), Puratronic™	50×50mm, 100×100mm, 100×300mm
AA46986-YD	Copper foil, 0.025mm (0.001 in.) thick, annealed, uncoated, 99.8% (metals basis)	30×30cm, 30×150cm, 30×1000cm
AA41785-H7	Nickel Wire, 0.15mm (0.006 in.) dia., approx.99%, Nickel 200 (metals basis)	250m, 1000m
AA40946-K2	Stainless Steel wire, 0.51mm (0.02 in.) dia., Type 304	50cm, 150cm
AA46579-FL	Aluminum Magnesium gauze, alloy 5056, 20 mesh woven from 0.23mm (0.009 in.) dia. wire	75×75mm, 150×150mm, 300×300mm
AA14092-RN	Magnesium Aluminum Zinc wire, 3.18mm (0.125 in.) dia., 90cm (35 in.) long	5×90cm, 25×90cm, 100×90cm
AA46714-FL	Aluminum Magnesium gauze, alloy 5056, 16 mesh woven from 0.24mm (0.0095 in.) dia. wire	75×75mm, 150×150mm

Organic Solvents/Electrolyte Components

VWR Cat. No.	Description	Available Sizes
AAH27270-06	1-Butyl-2,3-dimethylimidazolium chloride, 99%	50g
AAA12260-36	1-Methyl-2-pyrrolidinone, 99+%	500g, 2500g, 10000g
AA19740-04	1-n-Butylpyridinium chloride, 98%	50g
AAH61502-14	4-Fluoro-1,3-dioxolan-2-one, 98%	25g, 100g
AAA12477-AP	Diethyl carbonate, 99+%	2500ml, 10000ml
AAA15735-36	Ethylene carbonate, 99%	500g, 2500g, 10000g
AAH61502-14	Fluoroethylene carbonate, 4-Fluoro-1,3-dioxolan-2-one, 98%	100g
AAA15552-30	Propylene Carbonate, 99%	250g, 1000g, 2.5kg
AA41963-K2	Trichloroethylene, Electronic Grade, 99.5+%	1L, 4L, 4x4L
AAH60822-18	Vinyl ethylene carbonate, 4-Vinyl-1,3-dioxolan-2-one, 99%	50g, 250g

Application Highlights

Research

The battery chemicals offered from Thermo Fisher Scientific are a great choice for the academic and industrial research laboratories involved in battery research and development.

The metals, metal oxides and selective liquid and solid electrolytes are very popular among the battery researchers.

Electronic devices

The battery chemicals are extensively used in various components for electronics applications. Rechargeable batteries are the common choice for the fast-drain electronic devices such as mobile phones and laptops. Non-rechargeable batteries are preferred in slow-drain devices like clocks and remote controls.

Automobile industry

Rechargeable batteries revolutionized the automobile industry. Continuous development of improvement in battery technologies is evident from recent advancements in electric vehicles. The battery chemicals we offer in our portfolio are very important components of electric vehicles (EV) battery technology.



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