



A constant flow of innovation for battery technology

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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.

Anodes

Fisher Scientific Cat. No.	Description	Available Sizes
39724.18	Carbon black, acetylene, >99.9%	250g, 1kg, 3kg
45527.30	Carbon black, acetylene, 100% compressed, >99.9%	250g, 2x500g
H30253.14	Carbon black, Super P™ Conductive, 99+% (metals basis)	25g, 100g
46311.MD	Fullerene powder, 99% C60	250mg, 1g, 5g
11155.06	Germanium(IV) oxide, Puratronic™, 99.999%	5g, 25g, 100g
10510.06	Germanium(IV) oxide, White powder/flake/crystalline/beads, etc., 99.9999%	5g, 25g, 100g
40798.TA	Graphite powder, synthetic, conducting grade, -325 mesh, 99.9995% (metals basis)	28g, 113g, 227g, 454g
10769.14	Lithium foil, 0.75mm (0.03in) thick x 19mm (0.75in) wide, 99	25g
89709.MD	Silicon(IV) oxide, 99.8% (metals basis)	250g, 1kg, 5kg
88777.14	Silicon(IV) oxide, 99.995% (metals basis)	25g, 100g
10856.14	Silicon(IV) oxide, Puratronic™ 99.999% (metals basis)	100g
12283.22	Tin(IV) oxide, 99.9% (metals basis)	100g, 500g, 2kg
10760.18	Zinc shot, 1-6mm (0.04-0.24in), Puratronic™, 99.9999% (metals basis)	50g, 250g, 500g, 1kg

Binders

Fisher Scientific Cat. No.	Description	Available Sizes
L04280.22	Acrylic acid, 99%, stab. with ca 200ppm 4-methoxyphenol	100g, 500g
J61887.22	Alginic acid sodium salt, high viscosity	100g, 250g, 1kg

Cathodes

Fisher Scientific Cat. No.	Description	Available Sizes
14049.18	Lithium cobalt(III) oxide, 97%	50g, 250g, 1kg
42090.14	Lithium cobalt(III) oxide, 99.5% (metals basis)	25g, 100g
40250.14	Lithium manganese(III,IV) oxide, 99.5% (metals basis)	25g, 100g
12839.04	Lithium sulfide, 99.9% (metals basis)	2g, 10g, 50g, 250g
10755.09	Sulfur pieces, 99.99% (metals basis), Puratronic™	10g, 50g, 250g
43766.36	Sulfur powder, 99.5%	500g, 2kg
10343.14	Sulphur Pieces, Puratronic™, 99.9995% (metals basis)	25g, 100g, 500g
33394.36	Sulphur Powder, sublimed, -100 mesh, 0.995	500g, 2kg
44263.30	Zinc oxide, 99.9% (metals basis)	250g, 1kg, 5kg

Electrolytes

Fisher Scientific Cat. No.	Description	Available Sizes
13408.22	Lithium bromide, anhydrous, 99% min	100g, 500g, 2500g
13407.14	Lithium hydroxide, anhydrous, 98%	25g, 100g, 500g
13405.14	Lithium nitrate, anhydrous, 99%	25g, 250g, 1kg, 5kg
10804.09	Manganese(II) chloride tetrahydrate, Puratronic™, 99.999% (metals basis)	10g, 50g
A16199.AD	Potassium hydroxide, flake, 85%	500g, 2500g, 10000g
A10552.30	Sodium bromide, 99+% (dry wt.), water <1.0%	250g, 1000g, 5000g

Interstitials

Fisher Scientific Cat. No.	Description	Available Sizes
H27307.09	Lithium bis(trifluoromethylsulfonyl)imide, 98+%	10g, 50g
11529.03	Lithium hexafluorophosphate, 98%	1g, 10g, 50g
11528.09	Lithium tetrafluoroborate, 98%	10g, 50g
42180.VA	Nafion® N-117 membrane, 0.180mm thick, ≥0.90 meq/g exchange capacity	15×15cm, 30×30cm
42179.VA	Nafion® N-115 membrane, 0.125mm thick, ≥0.90 meq/g exchange capacity	15×15cm, 30×30cm, 60×60cm
A10239.22	Polyethylene powder, low density, 500 micron	100g, 500g, 2500g
45176.HB	Polyethylene sheet, High Density, 12.7mm (0.5 in.) thick	300×300mm
45175.HB	Polyethylene sheet, Low Density, 3.18mm (0.125 in.) thick	300×300mm
45197.HB	Polyethylene sheet, Low Density, 6.35mm (0.25 in.) thick	300×300mm
45196.HB	Polypropylene sheet, 3.18mm (0.125mm) thick	300×300mm

Metals- Battery Components

Fisher Scientific Cat. No.	Description	Available Sizes
43424.FI	Aluminum foil, 0.25mm (0.01 in.) thick, annealed, Puratronic™, 99.9995% (metals basis)	50×50mm, 100×100mm, 100×500mm
44332.YD	Aluminum foil, 0.5mm (0.02 in.) thick, annealed, Puratronic™, 99.9999% (metals basis)	50×50mm, 100×100mm, 100×500mm
46714.FI	Aluminum Magnesium gauze, alloy 5056, 16 mesh woven from 0.24mm (0.0095 in.) dia. wire	75×75mm, 150×150mm
46579.FI	Aluminum Magnesium gauze, alloy 5056, 20 mesh woven from 0.23mm (0.009 in.) dia. wire	75×75mm, 150×150mm, 300×300mm
40707.YD	Aluminum Ultrathin foil, 0.8 micron thick, 99.1% (metals basis)	30×30mm, 140×140mm
46986.H7	Copper foil, 0.025mm (0.001 in.) thick, annealed, uncoated, 99.8% (metals basis)	30×30cm, 30×150cm, 30×1000cm
42189.K2	Copper foil, 99.999% (metals basis), Puratronic™	50×50mm, 100×100mm, 100×300mm
14092.FL	Magnesium Aluminum Zinc wire, 3.18mm (0.125 in.) dia., 90cm (35 in.) long	5×90cm, 25×90cm, 100×90cm
41785.RN	Nickel Wire, 0.15mm (0.006 in.) dia., approx.99%, Nickel 200 (metals basis)	250m, 1000m
40946.FL	Stainless Steel wire, 0.51mm (0.02 in.) dia., Type 304	50cm, 150cm

Organic Solvents/Electrolyte Components

Fisher Scientific Cat. No.	Description	Available Sizes
H27270.06	1-Butyl-2,3-dimethylimidazolium chloride, 99%	50g
A12260.36	1-Methyl-2-pyrrolidinone, 99+%	10000g
19740.04	1-n-Butylpyridinium chloride, 98%	50g
H61502.14	4-Fluoro-1,3-dioxolan-2-one, 98%	25g, 100g
A12477.AP	Diethyl carbonate, 99+%	2500ml, 10000ml
A15735.36	Ethylene carbonate, 99%	500g, 2500g, 10000g
H61502.14	Fluoroethylene carbonate, 4-Fluoro-1,3-dioxolan-2-one, 98%	100g
A15552.30	Propylene Carbonate, 99%	1000g, 2.5kg
41963.K2	Trichloroethylene, Electronic Grade, 99.5+%	1L, 4L, 4x4L
H60822.18	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.

Visit eu.fishersci.com to browse the complete portfolio of products supporting battery research and manufacturing.

Contact us today:

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