

Registry Procedure – Weight Conversion Factors (Batteries)

The examples provided in the table below are not exhaustive. It is not intended to capture all obligated batteries under the regulation.

Note: Producers must report using actual weight if weight conversion factor is not available.

Single-Use Batteries Weight Conversion Factors by Chemistry and Size

Battery Types by Material	Weight (kg)
Alkaline Manganese - Button Cell	0.0015
Zinc-Air - Button Cell	0.0026
Silver Oxide - Button Cell	0.0023
Lithium - Button Cell	0.0026
Lithium - AA	0.0145
Lithium - AAA	0.0076
Lithium - Primary	0.0100
Zinc-Carbon – 6 V oblong lantern	1.2700
Zinc-Carbon – 6 V square lantern	0.6000
Zinc-Carbon – 9 V	0.0375
Zinc-Carbon - D	0.0945
Zinc-Carbon - C	0.0483
Zinc-Carbon - AA	0.0170
Zinc-Carbon - AAA	0.0097
Alkaline Manganese - AAA	0.0112
Alkaline Manganese - AA	0.0234
Alkaline Manganese - C	0.0689
Alkaline Manganese - D	0.1445
Alkaline Manganese – 9 V	0.0455

Battery Types by Material	Weight (kg)
Alkaline Manganese – 6 V square lantern	0.7485
Alkaline Manganese – 6 V oblong lantern	1.5855

Rechargeable Batteries Weight Conversion Factors by Chemistry and Size

Size	Chemistry	Weight (kg)
4 V	Lead Acid	1.330
6 V	Lead Acid	1.626
9 V	Nickel-Cadmium	0.035
	Nickel-Metal Hydride	0.042
12 V	Lead Acid	2.043
N	Nickel-Cadmium	0.010
	Nickel-Metal Hydride	0.011
AAA	Nickel-Cadmium	0.0105
	Nickel-Metal Hydride	0.013
	Other	0.011
AA	Nickel-Cadmium	0.0215
	Nickel-Metal Hydride	0.0271
	Other	0.022
A	Nickel-Cadmium	0.032
	Nickel-Metal Hydride	0.040
C	Nickel-Cadmium	0.073
	Nickel-Metal Hydride	0.080
	Other	0.058
Sub C	Nickel-Cadmium	0.0529
	Nickel-Metal Hydride	0.055
D	Nickel-Cadmium	0.145
	Nickel-Metal Hydride	0.1628
	Other	0.104
F	Nickel-Cadmium	0.231
	Nickel-Metal Hydride	0.2613
Pin Cell	Lithium-Ion	0.001
Button Cell	Lithium-Ion	0.0025
Prismatic Single Cell	Lithium-Ion	0.0217

Size		Chemistry	Weight (kg)
Cylindrical Single Cell		Lithium-Ion	0.0418
Pouch Cell	55-500 typical nominal mAh	Lithium-Ion	0.0052
	501- 1000 typical nominal mAh	Lithium-Ion	0.0158
	1001- 2000 typical nominal mAh	Lithium-Ion	0.030
	2001- 5000 typical nominal mAh	Lithium-Ion	0.055
	>5001 typical nominal mAh	Lithium-Ion	0.112

Rechargeable Batteries Weight Conversion Factors by Application

Application	Chemistry	Weight (kg)
Cell Phones E.g. cellular phones, smartphones	Lithium Cobalt Oxide (LCO)	0.028
	Lithium Nickel Manganese Cobalt Oxide (NMC)	0.053
Cameras/Games E.g. video game controller	Lithium-Ion (Includes: Lithium Cobalt Oxide, Lithium Nickel Manganese Cobalt Oxide, Lithium Manganese Oxide)	0.215
Others portable E.g. power banks, shavers, toothbrushes, drones, cordless mice, remote controls, MP3, cordless landline phones	Nickel-Metal Hydride (NiMH)	0.042
	Lithium-Ion (Includes: Lithium Nickel Manganese Cobalt Oxide, Lithium Manganese Oxide, Lithium Iron Phosphate)	0.215
	Lead Acid (PbA)	0.806
Tablets	Lithium-Ion (Includes: Lithium Cobalt Oxide, Lithium Nickel Manganese Cobalt Oxide)	0.246
Laptops/Portable PC	Lithium Cobalt Oxide (LCO)	0.341
	Lithium Nickel Manganese Cobalt Oxide (NMC)	0.438
Cordless tools E.g. gardening tools, cordless tools, power tools	Lithium Nickel Manganese Cobalt Oxide (NMC)	0.495
	Nickel-Metal Hydride (NiMH)	0.923
	Nickel-Cadmium (NiCd)	1.182
	Lead Acid (PbA)	1.556
E-bikes	Lithium-Ion (Includes: Lithium Nickel Manganese Cobalt Oxide, Lithium Manganese Oxide, Lithium Cobalt Oxide, Lithium Iron Phosphate)	2.802
Industrial excluding mobility E.g. pallet lifters, forklifts, energy storage for industrial use, other nonportable	Any Nickel (Includes Nickel-Cadmium Nickel-Metal Hydride)	2.963
	Lithium-Ion (Includes Lithium Manganese)	2.984

Application	Chemistry	Weight (kg)
	Oxide, Lithium Cobalt Oxide, Lithium Nickel Manganese Cobalt Oxide, Lithium Nickel Cobalt Aluminium Oxide, Lithium Iron Phosphate)	
Lighting E.g. security lighting, shielded or full cut-off lamps, control and power lines	Nickel-Cadmium (NiCd)	2.963
Medical E.g. measuring instruments, medical carts and beds, portable defibrillators	Lithium Cobalt Oxide (LCO)	2.984
Uninterruptible Power Supply (UPS)	Lithium Iron Phosphate (LFP)	2.984
Telecom	Lithium Nickel Manganese Cobalt Oxide (NMC)	2.984
Personal Mobility Devices/ Light Electric Vehicles E.g. golf carts, mobility scooters	Lithium Nickel Manganese Cobalt Oxide (NMC)	3.284
Off-Grid Energy Storage Eg. solar/wind energy systems, RV/boat energy storage	Lithium Iron Phosphate (LFP)	2.984