

Black mass Li-NMC batteries (NMC Type 622/811)

Art. ID BK-AC18.10664.0100
Unit 40 g
Deliverydetails No Dangerous Good /not restricted

Description

The material consists of a black mass of mixed metal concentrate sourced from processed lithium-ion batteries. The nickel-manganese-cobalt (NMC) ratios appear to represent a mix of 622 and 811 NMC Types of lithium-ion batteries.

Text/Information	Analyte/Parameter	CAS number	Concentration/Value	Unit	Method	Source
	Aluminium (Al)	[7429-90-5]	7,46 ± 0,12	%		
	Carbon (C)	[7440-44-0]	21,39 ± 0,45	%		
	Calcium (Ca)	[7440-70-2]	0,664 ± 0,034	%		
	Cobalt (Co)	[7440-48-4]	6,09 ± 0,04	%		
	Copper (Cu)	[7440-50-8]	2,34 ± 0,08	%		
	Fluorine (F)	[7782-41-4]	2,44 ± 0,15	%		
	Iron (Fe)	[7439-89-6]	1,11 ± 0,04	%		
	Potassium (K)	[7440-09-7]	0,08 ± 0,012	%		
	Lithium (Li)	[7439-93-2]	4,13 ± 0,03	%		
	Magnesium (Mg)	[7439-95-4]	0,526 ± 0,025	%		
	Manganese (Mn)	[7439-96-5]	5,35 ± 0,04	%		
	Sodium (Na)	[7440-23-5]	0,271 ± 0,03	%		
	Nickel (Ni)	[7440-02-0]	23,11 ± 0,05	%		
	Phosphorus (P)	[7723-14-0]	0,35 ± 0,043	%		
	Sulfur (S)	[7704-34-9]	0,375 ± 0,027	%		
	Silicon (Si)	[7440-21-3]	2,85 ± 0,18	%		
	Titanium (Ti)	[7440-32-6]	0,133 ± 0,013	%		
	Zirconium (Zr)	[7440-67-7]	0,248 ± 0,038	%		
	Barium (Ba)	[7440-39-3]	34,6 ± 3,7	ppm		
	Cerium (Ce)	[7440-45-1]	7,51 ± 1,15	ppm		
	Chlorine (Cl)	[7782-50-5]	283 ± 80	ppm		
	Chromium (Cr)	[7440-47-3]	129 ± 21	ppm		
	Dysprosium (Dy)	[7429-91-6]	0,55 ± 0,08	ppm		
	Gallium (Ga)	[7440-55-3]	11,6 ± 2,3	ppm		
	Gadolinium (Gd)	[7440-54-2]	0,64 ± 0,1	ppm		
	Lanthanum (La)	[7439-91-0]	45,7 ± 7,4	ppm		
	Molybdenum (Mo)	[7439-98-7]	2,94 ± 0,66	ppm		
	Praseodymium (Pr)	[7440-10-0]	1,38 ± 0,14	ppm		

Tin (Sn)	[7440-31-5]	66 ± 14	ppm
Strontium (Sr)	[7440-24-6]	38,2 ± 4,3	ppm
Terbium (Tb)	[7440-27-9]	0,12 ± 0,07	ppm
Thulium (Tm)	[7440-30-4]	<0,05	ppm
Vanadium (V)	[7440-62-2]	25,6 ± 1,5	ppm
Yttrium (Y)	[7440-65-5]	17,6 ± 2	ppm
Zinc (Zn)	[7440-66-6]	51 ± 8	ppm