POLARIS BATTERY LABS
Guiding your product to commercialization

NCM Electrode Specification Sheet

Active Material Characteristics

Formula	Natural Graphite [Li(N]	
Purity	>99%	
Surface Area	<0.5 m^2/g	
Particle Size Distribution:		
D10	>4 µm	
D50	813 µm	
D99	<28 µm	
Standard Formulation		
	94.5%	Graphite (active material)
	1.5%	Carbon Black - C65 (conductive aid)
	1.5%	CMC (binder)
	2.5%	SBR (binder)

Electrode Sheet Characteristics

Current Collector	Coated Copper	
Current Collector Thickness	~10 µm	
Sheet Size		
Loading	Low	High
Aerial Capacity (Base these on reversible capacity @ C/10, double check the values at right)	1.9 mAh/cm^2	3.8 mAh/cm^2
Coat Loading[1]	60 g/m^2	120 g/m^2
Calendared Density	1.5 g/m^2	1.75 g/m^2

[1]If ordered with a cathode, the coat loading will be matched so that the anode/cathode capacity ratio is 1.2

Electrical Characteristics[2]

Average Voltage vs. Li/Li+	0.1 V
Nominal Lithiation Capacity at:	
0.1 C	--This info coming soon--
0.5 C	--
Nominal Delithiation Capacity[3] at:	
0.1 C	--This info coming soon--
0.5 C	--
1 C	--
2 C	--
5 C	--
10 C	--

[2]Based on ½ cell data, Graphite vs. Li, voltage range of 0.01-1.5 V

[3]Lithiated using CCCV @ 0.5 C w/0.05 C cutoff current.