



USABC Cell Active Material Requirements

Table 1. USABC Cell active material gap chart – CY 2025 Commercialization.

Level	End of Life Parameter at 30°C ¹	Unit	USABC Positive Electrode Goal	USABC Negative Electrode Goal	Program Goal	Test Method
Material	Available Specific Capacity	mAh/g	> 250	> 2000		C/3 CC-CV Charge, C/3 CC Discharge
	Available Capacity Density	mAh/cc	> 675	> 3600		
	Nominal Voltage	V vs Li/Li ⁺	> 4.3	< 1.0		
	Irreversible Capacity Loss	%	< 10	< 10		
	Coating Level	mAh/cm ²	> 4	> 4		
	High Rate Charge Power	mA/g	> 800	> 6400		80% ΔSOC in 15min
	Peak Specific Discharge Power	mA/g	> 500	> 4000		30 Second Pulse
	Cost ²	\$/kg	< 10	< 5		3500 MT/yr (Anode) 28000 MT/yr (Cathode)
Cell	Swelling	%	< 5	< 10		-
	Calendar Life	Years	> 15	> 15		-
	Cycle Life	Cycles	> 1000	> 1000		DST

¹ The values in this table represent the performance of the complete electrode (including all active and inactive materials) in a full cell environment at end of life.

² Active material cost only

