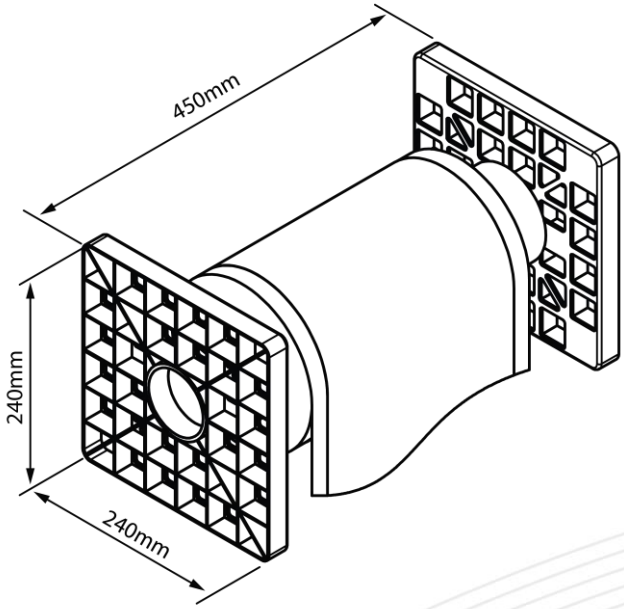
Datasheet BTRN-PD2005

Lithium Ion Battery Electrode



Datasheet date	191025		
Revision	004		
Lot No.	BTRN-PD2005		
Product Description	Anode for Lithium Ion Batteries with Regular Graphite compressed. Production sample for further processing. For testing purposes only.		
Electrode length	Roll of 50 m		
Coating width	240 mm (20mm blank on each side)		
Current collector width	280 mm		
Coating description	Double-sided continuously coated		
Core diameter	3”		
Component	**Material**		
Active material	Flake synthetic graphite		
Viscosity modifier	Carboxymethyl cellulose (CMC)		
Binder	Styrene butadiene copolymer (SBR)		
Balancing agent	---		
Conduction additive	---		
Solvent	Water		
Current collector	Copper		
Property	**Nominal**	**Measured**[1)]	**Comment**
Area specific reversible capacity [d)]	3.46 mAh/cm²	(3.53+/-0.12) mAh/cm²	Calculated value
Area specific 1st cycle capacity [d)]	3.66 mAh/cm²	(3.74+/-0.13) mAh/cm²	Calculated value
Area specific mass [m)]	10.00 mg/cm²	(10.21+/-0.34) mg/cm²	Coating w/o foil
Active material weight percentage [s)]	97.00 %		Weight %

Reversible capacity of active material [m)]	356.70 mAh/g		
1st charge capacity of active material [m)]	377.50 mAh/g		
Coating thickness, single side [m)]	62.50 um	(64.00+/-0) um	after compression
Coating density [d)]	1.60 g/ml	(1.59+/-0.05) g/ml	after compression
Current collector thickness [m)]	8.0 um	8.0 um	
Current collector area specific mass [m)]		7.23 mg/cm²	
Active material particle size d10 [s)]	6.9	6.8	
Active material particle size d50 [s)]	12.7	12.5	
Active material particle size d90 [s)]	22.6	22.2	
MacMullin number [m)]	26.00	(25.66+/-0.82)	
Ionic resistance [d)]	16.25 Ω		1cm² sample with 10 mS/cm electrolyte
Peel strength [m)]	>=4.00 mN/mm	4.07 mN/mm	@50mm/min, coating density
[m)] *measured value* [s)] *specified value* [d)] *driven value/calculated value* [*)] *per mass coating* [1)] *Mean±standard deviation*		Comments:	

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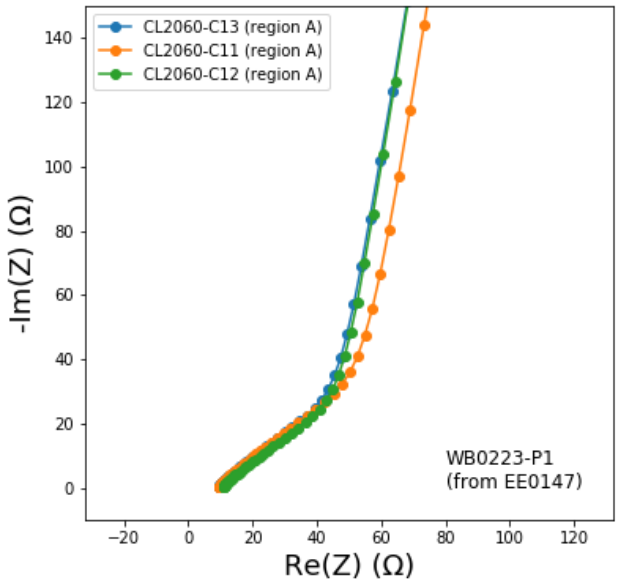
Electrochemistry

Symmetric cell impedance

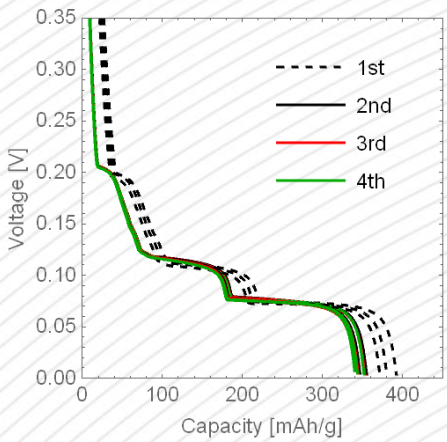


Note: Source EE0148

Property	Measured[1)]	Unit	Comment
Coating density	(1.59+/-0.05) g/ml	g/ml	
N_m corrected (n_m_corr)	(25.66+/-0.82)		Corrected for conductivity and area

Electrochemistry

Half-cell measurement vs. Li



Note: Source EE0060