TECHNICAL DATA SHEET

January 2017

C-NERGY™ Actilion GHDR

IMERYS Graphite

Graphite as active material for lithium-ion batteries

General Characteristics

Formula: Carbon
Aspect: Fine black powder
CAS number: 7782-42-5

Standard Packaging

300kg, flexible container

Guaranteed Values

Ash	0.1	% max
Moisture	0.2	% max

Typical Values

Purity		
Ash	0.05	%
Moisture	0.10	%
Crystallinity		
Lc	>100	Nm
Density		
Tap	1.1	g/cm^3
Specific Surface Area		
BET	4.1	m^2/g
Particle Size Distribution		
D10 (Laser Diffraction)	13	µm
D50 (Laser Diffraction)	17	µm
D90 (Laser Diffraction)	23	µm
Electrochemical Data		
Reversible Specific Charge (1st cycle)*	364	mAh/g
Coulombic Efficiency (1^{st} cycle)*	93	%

*Electrochemical measurement conditions:
- Lithium half-cell, coin-cell design
- Electrode formulation: 1.5 % CMC, 1.5 % SBR, 97% active material, electrode density 1.7 g cm^{-3}
- Electrolyte: 1 M $LiPF_6$ in EC/EMC 1:3 (v/v),
- 1^{st} electrochemical intercalation at 50mA/g to 5mV *vs*. Li/Li^+, then constant voltage hold <20mA/g), electrochemical deintercalation at 50 mA/g to 1.5 V *vs*. Li/Li^+, then constant voltage hold <20mA/g)

Imerys Graphite & Carbon Switzerland Ltd.
Strada Industriale 12 – 6743 – Bodio – Switzerland
Tel: +41 91 873 20 10 – Fax: +41 91 873 20 19 – www.imerys-graphite-and-carbon.com