

# TECHNICAL DATA SHEET

February 2016

## C-ENERGY™ SFG15L

TIMCAL Graphite

Graphite as additive  
for lithium-ion batteries

### General Characteristics

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

### Standard Packaging

15 kg paper bags, 39 bags on one pallet (585 kg)

### Guaranteed Values

Carbon content (dry)	99.98	% min
Ash	0.02	% max
Moisture	0.25	% max
Crystallite Height	100	nm min
Interlayer Distance	0.3354-0.3358	Nm
Fe	30	ppm
D90 (Laser Diffraction)	13.0-19.0	µm

### Typical Values

#### Purity

Ash	0.01	%
Moisture	0.1	%
Al	4	ppm
As	<0.5	ppm
Ca	30	ppm
Co	<1	ppm
Cr	<1	ppm
Cu	<1	ppm
Fe	10	ppm
Mo	<1	ppm
Ni	2	ppm
Pb	<2	ppm
Sb	<0.1	ppm
Si	30	ppm
Ti	5	ppm
V	5	ppm
S	20	ppm
Zn	2	ppm
Cl <sup>-</sup>	5	ppm
F <sup>-</sup>	5	ppm
NO <sub>3</sub> <sup>-</sup>	5	ppm
SO <sub>4</sub> <sup>2-</sup>	25	ppm

#### Crystallinity

Lc	>150	nm
c/2	0.3355	nm

#### Density

Scott	0.06	g/cm <sup>3</sup>
Xylene	2.26	g/cm <sup>3</sup>

#### Specific Surface Area

BET	9	m <sup>2</sup> /g
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#### Particle Size Distribution

<u>Laser Diffraction</u>		
D10	3.7	µm
D50	8.8	µm
D90	16.9	µm