



# TUBALL™

# BATT

## H2O 0.8% beta

## TECHNICAL DATA SHEET

Product SKU	Storage duration
02HO19	12 months

### Applications:

Lithium-ion batteries. Other.

### Overview:

TUBALL™ BATT H2O is a liquid dispersion of single wall carbon nanotubes (SWCNTs) in water that is used as a conductive additive in lithium-ion batteries.

Contact [energy@ocsial.com](mailto:energy@ocsial.com) for usage guidelines for specific battery chemistries.

### Composition:

<b>TUBALL™ single wall carbon nanotubes</b>	0.8 wt.%
<b>Water</b>	98.4 wt.%
<b>Dispersing agent</b>	0.8 wt.%

### Measured characteristics:

Controlled parameters	Unit of measurement	Specifications	Method of evaluation
Appearance	–	Odorless black liquid	Visual inspection
Optical density	Absorbance units	≥ 0.45	Spectroscopy
Solids content	%	1.44–1.76	Weight of dry residue
Viscosity*	cP	As produced < 17,000	Brookfield viscometer
pH	units	7.0–10.5	pH-meter

\*TUBALL™ BATT H2O is a non-Newtonian liquid: it is pseudoplastic and thixotropic, i.e., its viscosity depends on the shear rate (pseudoplastic) and on the history of the applied shear (thixotropic). The thixotropy of TUBALL™ BATT H2O is complex, and its behavior can be toggled between thixotropy and rheopexy by changing certain variables. OCSiAl uses the following measurement method: Brookfield viscometer DV2TRV RV-04 spindle, 20 rpm – 50 rpm – 100 rpm – 20 rpm – 12 rpm measurement sequence, 0.5 min each step. For the result, take the value of the last measurement at 12 rpm.

## CONTACT INFORMATION

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