

## TECHNICAL DATA SHEET

### SUSPENSION FOR LATEX APPLICATIONS



TUBALL™ LATEX H<sub>2</sub>O is a suspension based on TUBALL™ single wall carbon nanotubes produced by OCSiAl. TUBALL™ LATEX H<sub>2</sub>O suspensions are available in several versions, with various surfactants. TUBALL™ single wall carbon nanotubes are a unique additive that provides electrical conductivity at low dosages not achievable with any standard conductive additive. These low dosages enable reductions in the electrical resistivity of the material with minimal impact on the host matrix, including retaining and even improving mechanical properties, minimally increasing density, and limiting the influence on the rheological properties and color.

TUBALL™ LATEX H<sub>2</sub>O 0.2% is a suspension specifically designed to provide electrical conductivity for different types of latex articles. Improvements in properties such as modulus and tensile strength can be achieved, while elongation at break can be retained.

Note: For more information about the dosage and mixing conditions of TUBALL™ LATEX H<sub>2</sub>O, see the processing guidelines.

#### Suspension composition

TUBALL™ single wall carbon nanotubes	0.2 %
Water	98.8 %
Disodium methylenebisnaphthalenesulphonate (or leukanol)	1.0 %

#### Typical properties

Appearance	Black liquid
Density at 25°C, g/cm <sup>3</sup>	1.01
Stability	≥ 0.85
Viscosity*, mPa·s	< 30
pH	~ 7–8.5
Optical absorption**, 500 nm	≥ 0.45

\* Viscosity measured at 20 rpm is recorded. Sample temperature must be in 24-25°C range.

\*\*Measurements at a concentration of 0.001 wt.% and an optical length of 10 mm.

#### Packaging

Plastic containers/barrels (1, 5, 10, 20, 200 liters). OCSiAl provides TUBALL™ LATEX H<sub>2</sub>O test samples in plastic containers (1 liter), on the condition that the recipient agrees to disclose test results to OCSiAl.

## Storage and transportation

The product is stable in its unopened original packaging when stored under normal temperature conditions. The recommended storage life is up to 12 months when stored as directed.

## Safety

To ensure safe handling, the appropriate safety regulations should be observed. OCSiAl recommends that every user should be able to apply the safe handling procedures necessary for the user's applications before any handling or manufacturing takes place. A Safety Data Sheet outlining the hazards and handling methods for TUBALL™ LATEX H<sub>2</sub>O is available.

## Warranties and disclaimer

The Products correspond to the chemical composition indicated in the Technical Data Sheet and the Safety Data Sheet supplied with the Product. The information contained in this document (Information) is based on trials carried out by OCSiAl and may contain inaccuracies or errors that could cause injury, loss or damage.

OCSiAl gives no further warranty and makes no further representation regarding the Products and/or the accuracy of Information and/or suggestions for any particular use of the Products or Information, or that suggested use will not infringe any patent. The Products and Information are supplied on an "as is" basis. These express provisions are in place for all warranties, representations, conditions, terms, undertakings and obligations implied by statute, common law, custom, trade usage, course of dealing or otherwise (including implied undertakings of satisfactory quality, conformity with description, fitness for purpose and reasonable skill and care), all of which are hereby excluded to the maximum extent permitted by applicable law.

## Contact information

ASIA		EUROPE	NORTH & SOUTH AMERICA
<p><b>KOREA</b> Office 208, Pilot Plant Bldg. 12, Gaetbeol-ro, Yeonsu-gu, Incheon 406-840 Republic of Korea +82 50 8113 6959 <a href="mailto:asiapacific@ocsial.com">asiapacific@ocsial.com</a></p>	<p><b>CHINA</b> #2004, 20th floor, Tower B, Da Chong Business Centre, Yue Hai Street, Nanshan District, Shenzhen, Guangdong, China +86 755 867 00059</p> <p>TUBALL CENTER Shanghai Ground floor, Unit 4, Building 7, No.160, Basheng Road, Pudong district, Shanghai, China +86 135 9012 5295 <a href="mailto:china@ocsial.com">china@ocsial.com</a></p>	<p><b>LUXEMBOURG</b> 1 Rue de la Poudrerie L-3364 LEUDELANGE Grand-Duche de Luxembourg +352 27990373 <a href="mailto:europa@ocsial.com">europa@ocsial.com</a></p> <p><b>RUSSIA</b> 29, bld. 2, Kalanchevskaya Str., Moscow, 107078 +7 499 653 5152</p> <p>24, Inzhenernaya Str., Novosibirsk 630090, Russia +7 383 201 8387 <a href="mailto:russia@ocsial.com">russia@ocsial.com</a></p>	<p><b>USA</b> 500 S Front Str., Suite 860, Columbus, OH 43215 +1 415 906 5271 <a href="mailto:usa@ocsial.com">usa@ocsial.com</a></p>
<p><b>HONG KONG</b> Room 1102, 11/F, Lippo Sun Plaza, 28 Canton Road, Tsim Sha Tsui, Kowloon, Hong Kong +852 3575 3946</p>	<p><b>JAPAN</b> Tokyo, Japan <a href="mailto:japan@ocsial.com">japan@ocsial.com</a></p>		
<p><b>INDIA</b> Shivam Centrium, Sahar Road, Koldongri, Above Nexa Showroom, Andheri East, Mumbai, India, 400069 + 91 22 6288 4200 <a href="mailto:india@ocsial.com">india@ocsial.com</a></p>			