TUBALL™ COAT_E H_2O 0.4% (sodium dodecylbenzenesulfonate)

TUBALL™ COAT_E H_2O 0.4% (sodium dodecylbenzenesulfonate or SDBS) is a suspension of TUBALL™ single wall carbon nanotubes in water intended for reducing the surface electrical resistivity of **water-based systems**. In addition to water and TUBALL™ single wall carbon nanotubes, the suspension also contains sodium dodecylbenzenesulfonate as a stabilizer. The suspension is available in the form of a black homogeneous odorless liquid.

TUBALL™ is a unique single wall carbon nanotube additive from OCSiAl that provides electrical conductivity at ultra-low dosages with minimal impact on the rheological and mechanical properties of the host matrix.

APPLICATIONS

- Anti-static construction and industrial coatings;
- Anti-static and conductive automotive coatings;
- Other applications where electrical conductivity is required.

BENEFITS

TUBALL™ COAT_E H_2O 0.4% (SDBS)

- Provides coatings with permanent anti-static and conductive properties;
- Allows production of conductive coatings that retain transparency or bright colors;
- Ensures uniform electrical conductivity without “hot spots”;
- Does not significantly increase viscosity of the host material.

DISPERSION COMPOSITION

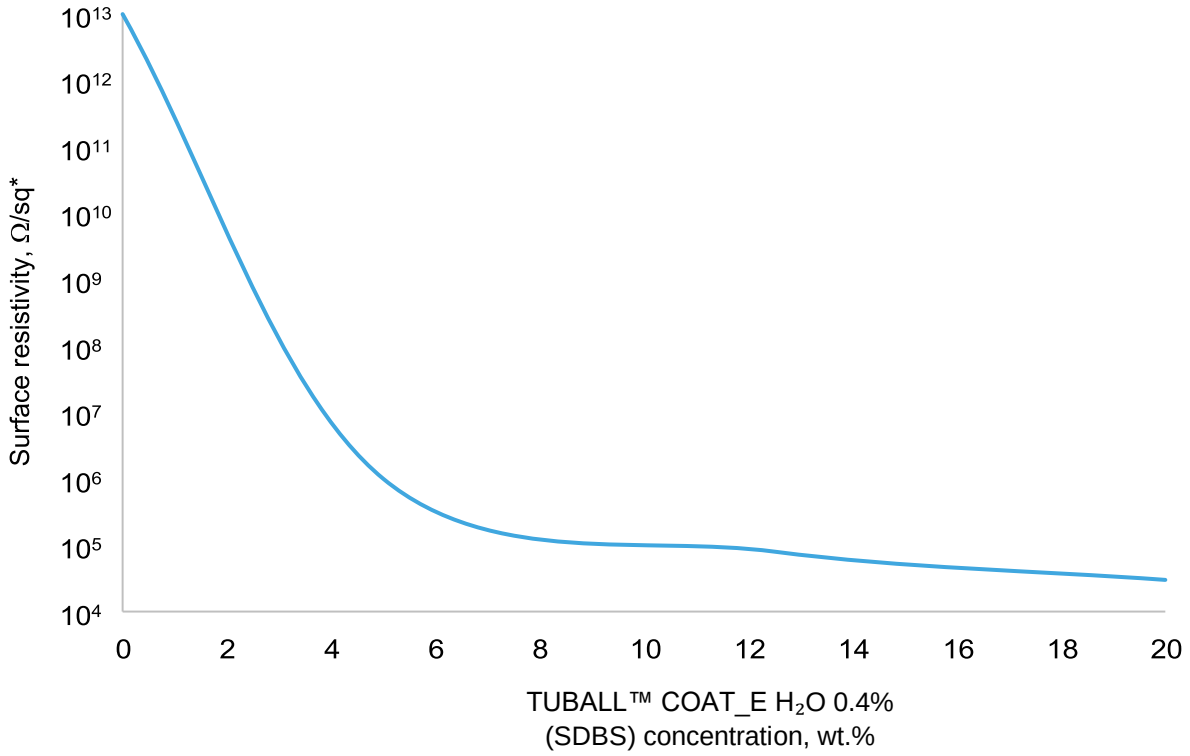
TUBALL™ COAT_E H_2O 0.4% (SDBS) contains:

TUBALL™ single wall carbon nanotubes	0.4%
Sodium dodecylbenzenesulfonate (stabilizer)	1.5%
Water	98.1%

TYPICAL ADDITION RATE

Depending on the formulation, the main polymer, and the processing conditions, the loading range of TUBALL™ COAT_E H_2O 0.4% (SDBS) for anti-static or dissipative applications can be 5–10 wt.%. The exact loading level depends on the required performance, system characteristics, and processing conditions, and the other ingredients present.

An example of a percolation curve, obtained by dilution of TUBALL™ COAT_E H_2O 0.4% (SDBS) in a waterborne polyurethane system (30% solid content), is shown in the figure below. Dilution of the suspension in the system was performed using a mechanical overhead stirrer.



* Measurements conducted using a SIMCO ST-4 (handheld device). Thickness of dry coating: 10 µm.

DILUTION

In order to obtain a high-quality TUBALL™ COAT_E dispersion, OCSiAl recommends that close attention be paid to the dilution procedure. Refer to the Processing Guidelines for detailed information.

PACKAGING

OCSiAl provides TUBALL™ COAT_E H_2O 0.4% (SDBS) samples in plastic bottles (from 100 ml). Industrial volumes are available in different packaging up to 50 l.

STORAGE AND TRANSPORTATION

The product is stable in unopened original packaging when stored at temperatures between 5 ºC and 50 ºC. The recommended storage life is up to 6 months when stored as directed. it is not recommended to shake the product actively, because it leads to a high foaming

SAFETY

To ensure safe handling, appropriate safety regulations should be observed. OCSiAl recommends that every user should ensure they are 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™ COAT_E H_2O 0.4% (SDBS) is available.

WARRANTIES AND DISCLAIMER

The Product corresponds 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 Product and/or the accuracy of Information and/or suggestions for any particular use of the Product or Information, or that suggested use will not infringe any patent. The Product 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.

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