

CarboDis



CarboDis are extra-high-grade, dustfree dispersions of carbon nanotubes of graduated concentrations in water for creating specific mechanical and electrical properties in an end-product.

Products of the **CarboDis** series are dustfree, simply dosed and stable dispersions of carbon nanotubes. They can be used to create specific electrical and mechanical properties in an end-product. The special dispersion processes mean that small amounts are sufficient to achieve an optimal effect. Different product variants open up a wide field of applications, and can be worked into all water based and water-compatible systems.

The dispersions of the **CarboDis** product series give the user an optimal basis for successfully working carbon nanotubes (CNTs) into their material.

CarboDis is characterized by the following features:

- ready dispersed CNTs, without agglomerates,
- uncomplicated, safe handling through water-bound nanotubes,
- highly stable dispersion through suitable additives or functionalization (no surfactants),
- ionogeneity matched to the range of use.

All dispersions come to standard with a CNT content of 1 weight % and 2 weight %. Dispersions with up to 4 weight % CNTs can be produced for custom requirements.

CNTs are optimally dispersed and stabilized in a multi-stage process developed inhouse by FutureCarbon. This enables us to produce dispersions with especially low viscosity of less than 100mPa·s.

The stability of **CarboDis** dispersions is achieved by different additives or chemical pretreatment of the CNTs. A selection of types ensures compatibility of the dispersion with very different applications:

- **CarboDis TN** with electrically neutral surfactant,
- **CarboDis TK** with cationic surfactant,
- **CarboDis TA** with anionic surfactant,
- **CarboDis ES** with functionalized nanotubes.

CarboDis can be worked into all water based or water-compatible systems to create specific electrical or mechanical properties in an end-product.

CarboDis has already proved successful in the following fields of application:

- coatings,
- surface finishes,
- adhesives,
- sealants,
- lacquers,
- ceramic glazes,
- building materials.

Only small quantities of **CarboDis** are needed for it to demonstrate its positive effect. It can also be used as an additive in the manufacture of antistatic plastic flooring and coatings. This is an effective safeguard against electrostatic discharge – a means of improving safety.

In addition to improving electrical properties, **CarboDis** can also be used to enhance mechanical parameters such as resistance to abrasion.