

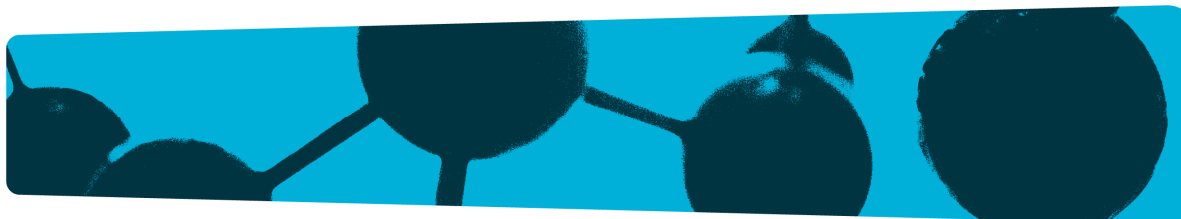
## High-quality, aqueous nanodiamond dispersion

### Carbodeon uDiamond<sup>TM</sup> Allegro specific characteristics

▶ Nanodiamond crystal size	4 – 6 nm
▶ Nanodiamond content in solid phase, no less than	97 wt. %
▶ Oxidable carbon content in solid phase	≤ 2.5 wt. %
▶ Metallic incombustible impurity content in solid phase	≤ 1.2 wt. %
▶ Bulk density	~ 0.5 g/cm <sup>3</sup>
▶ Pycnometric density	~ 3.1 – 3.2 g/cm <sup>3</sup>
▶ Specific surface area	~ 330 g/m <sup>2</sup>
▶ Constant of crystal lattice	0.3573 ± 0.0005 nm
▶ Graphitization in vacuum, starting at	~ 1100 °C
▶ Oxidation in air, starting at	~ 450 °C
▶ pH of suspension	4 – 8
▶ Concentration of nanodiamonds in dispersion	5 wt. %

### Main application areas include

- ▶ Electrolytic coatings
- ▶ Polishing fluids and pastes
- ▶ Abrasive applications
- ▶ Polymer-diamond composites (predominantly with thermoplastics)
- ▶ Cold-plasma metal-diamond and polymer-diamond coatings
- ▶ Medical and biological applications



**Carbodeon**  
SUPERHARD NANOMATERIALS

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