# Novotech Copper Oxide

**Product #: 1201CB**

**Nanopowder Copper Oxide (CuO, 99+ %, 20- nm)**

## Description

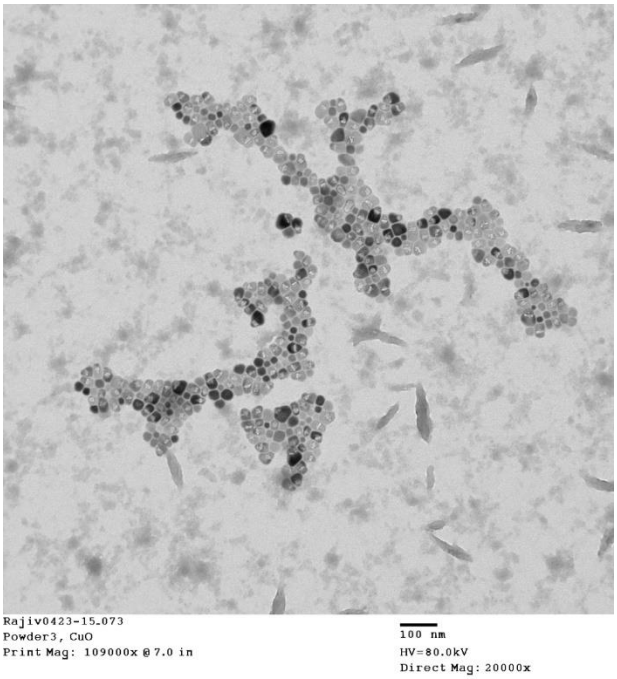
Nanopowder copper oxide produced with Novotech's proprietary technology contains not less than 99.8% wt. of oxide phases CuO. The content of other elements is not more than 0.05% wt. Nano copper oxide is a black powder. The average particle size is 20 nm. The particles are spherical. Separate powder particles form micro agglomerates. This chemical has no smell, is insoluble in water and dissolves slowly in alcohol or ammonia solutions and is soluble in diluted acids NH4Cl, (NH4) 2CO3 or potassium cyanide solution.

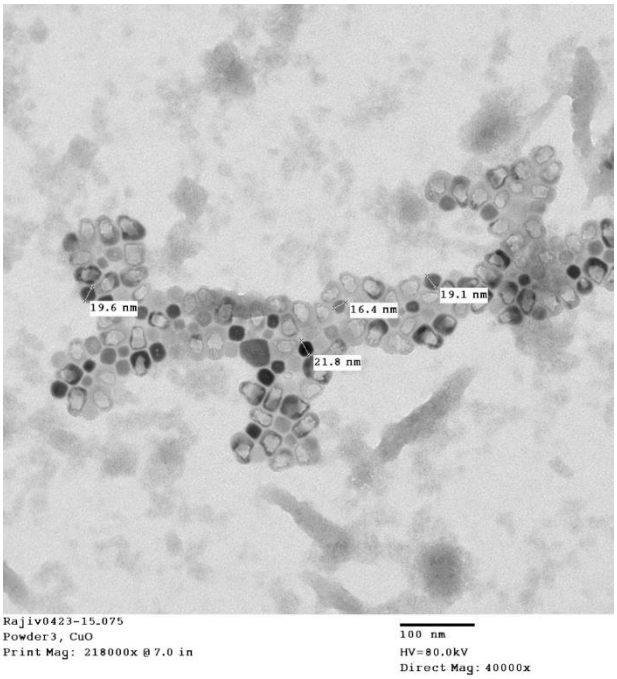
## Specification

| TYPICAL PROPERTIES | VALUE |
|---|---|
| CAS | 1317-38-0 |
| EC Number | 215-269-1 |
| Color | black |
| Molecular Formula | CuO |
| Molecular Weight | 79.545 g/mol |
| pH | 7- 8.5 |
| Average Particle Size | 20 nm |
| Solubility | H2O: insoluble |
| Density: | 6.315 g/cm3 |
| Morphology | |
| BET Surface Area | 120 (m2/g) |
| Surface modification | Yes |

| CHEMICAL ANALYSIS (Calcined Basis) | | | |
|---|---|---|---|
| Element | Sample (%) | Element | Sample (%) |
| Ba | 0.007 | Ca | 0.004 |
| Cd | 0,025 | K | 0.003 |
| Co | 0.006 | P | 0.003 |
| Zn | 0,02 | Mg | 0.0075 |
| Sr | 0.0023 | Fe | <0.078 |

Other elements tested (<0.01%): Ag, As, Au, B, Be, Bi, Ce, Co, Cr, Cu, In, Li, Mn, Mo, Nb, Ni, Pb, Pd, Pt, Sb, Se, Sn, Ta, Te, Tl, V, W, & Zr. Results in weight percent unless otherwise indicated.



## Applications

Novotech's nano-copper oxide can be used as an additive in the biomedical industry, for catalyst and superconducting materials, in thermoelectric materials, sensing materials, glass, ceramics and in many other fields. As a ceramic resistor our nano-copper oxide can be used as a magnetic storage media, in gas sensors, near-infrared tilters, photoconductive and photothermal applications. In semiconductors it can be used for solar energy transformation and as a high-tech superconductor.

### Antifouling paints

Novotech nano-coper oxide colloids is a highly effective low cost biocide additive for use in the lacquer coatings to prevent algae growth and mollusc overgrowth on exposed underwater equipment. Applications include ship hulls, underwater pipes, oil rig equipment, buoys and navigational aids