NANOSHEL
Creating Miracles in Black

NS6130-02-223

BARIUM TITANATE
Nanoparticles

Quick Facts

Product	:	Barium Titanate Nanoparticles
Stock No	:	NS6130-02-223
CAS	:	12047-27-7
Molecular Formula	:	$BaTiO_3$
Form	:	Powder

Purity
99.9%

Technical Specification

Molecular Weight	Density	Melting Point	APS
233.192 g/mol	6.02 g/cm³	1625 °C	100nm

Barium titanate powder can be used in nonlinear optics as it has high beam-coupling gain and can operate at near-infrared and visible wavelengths. Barium titanate can be doped with certain amounts of other metals like yttrium, scandium and samarium to make it a semiconducting material. As a semiconductor, Barium titanate shows PTCR properties in polycrystalline form. Also at Curie temperature, Barium titanate shows an increased resistivity which can vary in magnitude. In this temperature, Barium titanate may change its phase from tetrahedral to cubic.

Application

- ✓ Electrical insulator
- ✓ In capacitors as a dielectric ceramic material
- ✓ Piezoelectric material in microphones
- ✓ Photorefractive applications

$BaTiO_3$
APS 100nm

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