



Cerium Hexaboride Powder

Cerium Boride, also called Cerium Hexaboride or CeB₆, is a refractory ceramic material. Nextgen Advanced Materials supplies Cerium Hexaboride Powder with high quality and fast delivery, and customized products are also available.

Product Description

As the professional manufacture, we would like to provide you high quality Nextgen Cerium Hexaboride Powder. And we will offer you the best after-sale service and timely delivery. Cerium Boride, also called Cerium Hexaboride or CeB₆, is a refractory ceramic material. The principal use of cerium hexaboride is a coating of hot cathodes, or hot cathodes made of cerium hexaboride crystals. It usually operates at temperature of 1450 °C.

Borides are hard, high-melting materials with metal-like conductivity, and they are stable to nonoxidizing acids but break down in strong oxidizing agents and strong alkalis. Borides are used in semiconductors, superconductors, diamagnetic, paramagnetic, ferromagnetic, anti-ferromagnetic, turbine blades, and rocket nozzles.



Material Data for LaB₆ and CeB₆

Parameter	Units	LaB ₆	CeB ₆
Stoichiometry	N/A	~6	
Metal Impurities	ppm by wt.	<30	
Density	g/cm ³	4.72	4.80

Coefficient of Thermal Expansion	$\alpha \times 10^6$	5.6	6.2
Electrical Resistivity	$\mu\Omega\text{-cm}$	~50	~65
Effective Work Function (100) at 1800 K	eV	2.70	2.65
Spectral Emissivity at 0.65 microns	N/A	0.765	0.779
Evaporation rate at 1800 K (UHV)	g/cm ² /s	2.2 x 10 ⁻⁹	1.6 x 10 ⁻⁹
Orientation limit for specific orientation	degrees	<2	
Pyrolytic block mount resistance @ 1800 K	Ohms	1.45	