

## MarkeTech BGO (Bismuth Germanate, Bi<sub>4</sub>Ge<sub>3</sub>O<sub>12</sub>) Scintillator Crystal

Category : Ceramic , Oxide

**Material Notes:**

Bismuth germanate is intrinsic scintillation material with high absorption power. Due to its high effective atomic number and high density, BGO is a very efficient gamma absorber with high photo effect fraction which results in a very good photo peak to Compton ratio. BGO detectors are preferred for medium and high-energy gamma counting and high-energy physics applications. Data provided by the supplier, MarkeTech International.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_MarkeTech-BGO-Bismuth-Germanate-Bi4Ge3O12-Scintillator-Crystal.php](http://www.lookpolymers.com/polymer_MarkeTech-BGO-Bismuth-Germanate-Bi4Ge3O12-Scintillator-Crystal.php)

Physical Properties	Metric	English	Comments
Density	7.13 g/cc	0.258 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Mohs	5.0	5.0	

Thermal Properties	Metric	English	Comments
CTE, linear	7.00 $\mu\text{m}/\text{m}\cdot\text{C}^\circ$	3.89 $\mu\text{in}/\text{in}\cdot\text{F}^\circ$	
Melting Point	1050 $\text{C}^\circ$	1920 $\text{F}^\circ$	

Descriptive Properties	Value	Comments
Crystal Structure	Cubic	
Hydroscopic?	No	
Luminescence: Afterglow	<0.005%	at 6 ms
Luminescence: Decay Constant	300 n/s	
Luminescence: Integrated Light Output	15-20	NaI:Tl = 100
Luminescence: Photon Yield	2 to 3	300K; 10 <sup>3</sup> pH/MeV
Luminescence: Radiation Length	1.1 cm	
Luminescence: Wavelength of max emissions	480 nm	

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