

All technical data presented represent typical results, unless stated otherwise as min/max values. No guarantee is made that material will meet exactly the values shown.

## Single Crystal Magnesium Oxide (MgO) [99.9%]



### ■ MgO Properties

Crystal structure	Cubic
Lattice constant	0.4213nm
Growth method	Arc Melting Technology
Density	3.58 g/cm <sup>3</sup>
Melt Point	2800 oC
Hardness (Mohs)	5.8
Thermal expansion	12.80 x 10 <sup>-6</sup> / oC
Dielectric Constant	9.8
Color and Appearance	Colorless

### ■ Chemical Properties by ICP

#### TEST 1 (Unit:ppm)

Material : Magnesium Oxide (MgO) Single Crystal  
 by Andong National University  
 Test method : ICP/AES at the room temperature  
 Test Result

Content	Block Length	B	Mg	Si	Ca	Fe	Al2O3
No. 4	85mm	7.31	99.95	6.92	204.40	48.05	54.72
No. 5	90mm	7.50	99.96	5.61	189.25	41.29	53.52
No. 6	39mm	7.31	99.96	8.18	201.58	40.12	38.29
No. 9	60mm	7.01	99.95	7.55	207.38	52.32	38.58
No. 10	42mm	5.34	99.96	7.28	188.64	56.84	41.47

Remark

1. Tested all blocks are >42mm x 42mm size in dimension.

■ XRD Data

Orientation( ° )	File No	Intensity	Theta	Remark
0	Z11162	86,000	20,76	
45	Z11163	80,980	21	
90	Z11164	75,000	21,12	Highest
135	Z11165	88,767	21,06	
180	Z11166	91,000	20,86	
225	Z11167	85,270	20,64	
270	Z11168	73,247	20,5	Lowest
315	Z11169	81,757	20,52	
360	Z11170	86,000	20,76	

Orientation Tolerance = 20,81

Application: Advanced ceramics, Specialty materials

Product type: Consumables, Chemicals

Production scale: Lab, Pilot, Commercial

Search tags: Advanced Ceramics, MgO, Single crystal, Deposition

