

Mateck Calcium Fluoride (CaF₂)

Category : Ceramic , Halide

Material Notes:

Optical crystals

Order this product through the following link:

http://www.lookpolymers.com/polymer_Mateck-Calcium-Fluoride-CaF2.php

Physical Properties	Metric	English	Comments
Density	3.18 g/cc @Temperature 20.0 Â°C	0.115 lb/inÂ³ @Temperature 68.0 Â°F	
Solubility	0.0016 ppm	0.0016 ppm	
a Lattice Constant	5.462 Å...	5.462 Å...	
Molecular Weight	78.08 g/mol	78.08 g/mol	

Mechanical Properties	Metric	English	Comments
Vickers Microhardness	1650	1650	MPa
Hardness, Mohs	4.0	4.0	
Modulus of Elasticity	89.9 GPa	13000 ksi	<111> direction
	146.1 GPa	21190 ksi	<100> direction
Poissons Ratio	0.216	0.216	
Shear Modulus	33.8 GPa	4900 ksi	<111> direction
	47.6 GPa	6900 ksi	<100> direction

Thermal Properties	Metric	English	Comments
CTE, linear	16.5 - 19.4 Âµm/m-Â°C @Temperature -60.0 - 60.0 Â°C	9.17 - 10.8 Âµin/in-Â°F @Temperature -76.0 - 140 Â°F	
Specific Heat Capacity	0.8876 J/g-Â°C	0.2121 BTU/lb-Â°F	
Thermal Conductivity	9.71 W/m-K @Temperature 36.0 Â°C	67.4 BTU-in/hr-ftÂ²- Â°F @Temperature 96.8 Â°F	
Melting Point	1418 Â°C	2584 Â°F	

Optical Properties	Metric	English	Comments
Refractive Index	1.2996	1.2996	n10.6
	1.4349	1.4349	n3
	1.2299	1.2299	
	@Wavelength 12000 nm	@Wavelength 12000 nm	
	1.3856	1.3856	
	@Wavelength 6000 nm	@Wavelength 6000 nm	
	1.4239	1.4239	
	@Wavelength 2000 nm	@Wavelength 2000 nm	
	1.4951	1.4951	
	@Wavelength 200 nm	@Wavelength 200 nm	
Transmission, Visible	97 %	97 %	Internal Transmittance
	@Wavelength 500 nm	@Wavelength 500 nm	
IR Transmittance	19 %	19 %	Internal Transmittance
	@Wavelength 10000 nm	@Wavelength 10000 nm	
	97 %	97 %	Internal Transmittance
	@Wavelength 7000 nm	@Wavelength 7000 nm	
UV Transmittance	87 %	87 %	Internal Transmittance
	@Wavelength 200 nm	@Wavelength 200 nm	

Descriptive Properties	Value	Comments
Cleavability	(111)	perfect
Constants of Elastic Compliance (Pa ⁻¹)	-1.53E-12	S12
	2.958E-11	S44
	6.83E-12	S11
Symmetry Class	m3m	
Syngony	cubic	
Thermal Coefficient of Refractive Index	-0.95E-5 to -1.17E-5	
Thermal Stability, Â°C	20Â±2	

Transmission Range (microns) Descriptive Properties	0.15 - 9 Value	Comments
--	-------------------	----------

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China