

Mateck Sodium Chloride (NaCl)

Category : Ceramic , Halide

Material Notes:

Optical crystals

Order this product through the following link:

http://www.lookpolymers.com/polymer_Mateck-Sodium-Chloride-NaCl.php

Physical Properties	Metric	English	Comments
Density	2.17 g/cc	0.0784 lb/in ³	
a Lattice Constant	5.64 Å	5.64 Å	
c Lattice Constant	5.64 Å	5.64 Å	
Molecular Weight	58.45 g/mol	58.45 g/mol	

Mechanical Properties	Metric	English	Comments
Vickers Microhardness	200	200	MPa
Hardness, Mohs	3.0	3.0	
Modulus of Elasticity	32.7 GPa	4740 ksi	in <111> direction
	43.7 GPa	6340 ksi	in <100> direction
Poissons Ratio	0.203	0.203	
Shear Modulus	12.8 GPa	1860 ksi	in <111> direction
	15.9 GPa	2310 ksi	in <100> direction

Thermal Properties	Metric	English	Comments
CTE, linear	36.4 - 40.8 µm/m-°C	20.2 - 22.7 µin/in-°F	
	@Temperature -60.0 - 60.0 °C	@Temperature -76.0 - 140 °F	
Specific Heat Capacity	0.871 J/g-°C	0.208 BTU/lb-°F	
Thermal Conductivity	6.15 W/m-K	42.7 BTU-in/hr-ft ² -°F	
	@Temperature 35.0 °C	@Temperature 95.0 °F	
Melting Point	801 °C	1470 °F	

Optical Properties	Metric	English	Comments
Refractive Index			n10.6

Optical Properties	1.4906 Metric	1.4906 English	Comments
	1.5467	1.5467	at ne
	1.3822	1.3822	
	@Wavelength 20000 nm	@Wavelength 20000 nm	
	1.4947	1.4947	
	@Wavelength 10000 nm	@Wavelength 10000 nm	
	1.5153	1.5153	
	@Wavelength 6000 nm	@Wavelength 6000 nm	
	1.532	1.532	
	@Wavelength 1000 nm	@Wavelength 1000 nm	
	1.7899	1.7899	
	@Wavelength 200 nm	@Wavelength 200 nm	
Transmission, Visible	97 %	97 %	Internal Transmittance
	@Wavelength 500 nm	@Wavelength 500 nm	
IR Transmittance	5.0 %	5.0 %	Internal Transmittance
	@Wavelength 20000 nm	@Wavelength 20000 nm	
	87 %	87 %	Internal Transmittance
	@Wavelength 15000 nm	@Wavelength 15000 nm	
UV Transmittance	16 %	16 %	Internal Transmittance
	@Wavelength 200 nm	@Wavelength 200 nm	

Descriptive Properties	Value	Comments
Cleavability	(100)	perfect
Constants of Elastic Compliance (Pa ⁻¹)	2.285E-11	S11
	-4.69E-12	S12
	7.834E-11	S44
Symmetry Class	m3m	
Syngony	cubic	
Thermal Coefficient of Refractive Index	-3.31E-5 to -3.73E-5	at 3.39 microns for ± 60°C

Descriptive Properties (microns)

Value⁰

Comments

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