

Magnesium Fluoride (MgF₂) Deposition Materials

Fairfield Crystal Technology's evaporation chemicals for optical coating are produced to a consistent high quality and purity. Our MgF₂ vacuum-melted deposition material is made from single crystal boules that ensures 99.999% pure crystal material that evaporates cleanly and completely, without out-gassing or spitting and leaves a hard, uniform coating on the substrate. MgF₂ is a low index coating material that has been used for many years in anti-reflection and multilayer coatings. It is insoluble and hard if deposited on hot substrates. Fairfield Crystal works directly with our customers to ensure that the product meets their specification and is delivered in a timely manner.



Substance	Form	Size Range	Evaporation Temperature	Evaporation Pressure
Magnesium Fluoride (MgF ₂)	Granules	1 to 6mm	approx. 950°C	10 ⁻⁵ to 10 ⁻⁶ torr

SPECTROCHEMICAL ANALYSIS (Typ)

Element	Content ppm	Detection Limit (DL) ppm
Aluminum (Al)	< DL	0.27
Boron (B)	< DL	0.36
Calcium (Ca)	< 10	0.32
Chromium (Cr)	< DL	0.26
Copper (Cu)	< 4	0.03
Iron (Fe)	< 4	0.27
Lead (Pb)	< DL	0.37
Manganese (Mn)	< DL	0.09
Nickel (Ni)	< DL	0.17
Silver (Ag)	< DL	0.07
Tin (Sn)	< DL	0.25
Titanium (Ti)	< 3	0.09
Vanadium (V)	< DL	0.78
Zinc (Zn)	< DL	0.06

OPTICAL PROPERTIES

Refractive Index	1.390 @ 300nm
	1.380 @ 400nm
	1.370 @ 500nm
	1.360 @ 700nm
	1.350 @ 1000nm

PHYSICAL PROPERTIES

Density	3.18 gm/cc
Melting Point	1585°C
Poisson Ratio	0.271
Hardness	415 Knoop
Crystal Structure	Tetragonal

Hazard Labeling: Not regulated by Department of Transportation (DOT)

Shipping Classification: UPS or FedEx: Ground, Air

Fairfield Crystal Technology will be pleased to quote you price and delivery.

Contact us

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