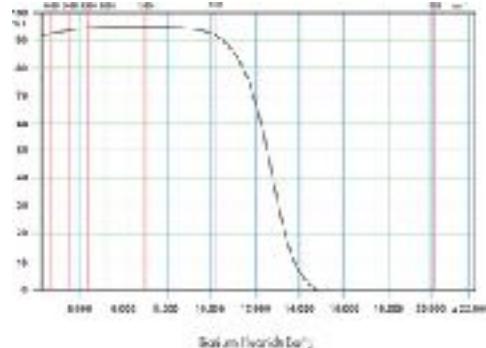


# Optical Material Barium Fluoride (BaF<sub>2</sub>) Optical Crystals

Barium Fluoride (BaF<sub>2</sub>) is commonly used as a scintillator material and is useful as a transmission window material for IR spectroscopy particularly for analysis of fuel oil samples. This material is extremely sensitive to thermal shock.

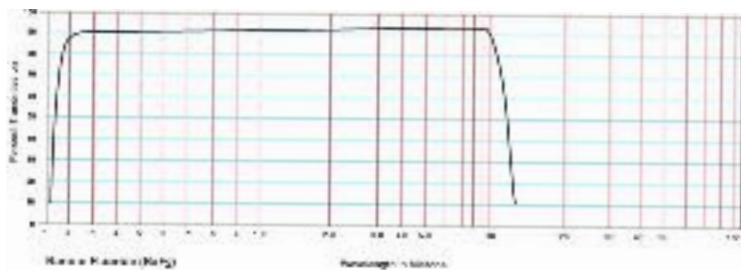
## Optical Properties – Barium Fluoride (BaF<sub>2</sub>) Optical Crystals

Transmission Range: 150nm to 11.5μm  
Refractive Index: 1.46 @ 3.2 μm  
Reflection Loss: 6.8% @ 3.0μm ( 2 surfaces)



## Physical Properties - Barium Fluoride (BaF<sub>2</sub>) Optical Crystals

Melting Point: 1280° C  
Hardness (Knoop): 82 psi  
Young's Modulus: 53.07 GPa  
Modulus of Rupture: 3900 psi  
Structure: Cubic--111 cleavage plane



## Chemical Properties-- Barium Fluoride (BaF<sub>2</sub>) Optical Crystals

Solubility: 0.17gm./100 gm water @ 23° C. Soluble in acid and NH<sub>4</sub>Cl



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