



BaF₂ Crystal



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|---------------------------------|----------------------|
| Density (g/cm ³) | 4.89 |
| Melting Point (°C) | 1280 |
| Cleavage plane | <111> |
| Hardness (Mohs) | 3 |
| Index of Refraction | 1.49~1.51 |
| Decay time (ns) | 620(slow), 0.6(fast) |
| Wavelength of emission max (nm) | 310(slow), 220(fast) |
| Afterglow (after 3ms) % | 0.005 |
| Light yield (to NaI:Tl) | 20%(slow), 4%(fast) |
| Hygroscopicity | None |

BaF₂ crystal is a kind of fast scintillator, it has fast and slow luminescence component, and can be used to measure both energy spectrum and time spectrum. It is regarded as the fastest scintillator so far.

Key Features

- High light yield
- Fast decay time
- Strong resistance to radiation damage

Applications:

- Positron annihilation lifetime measurement
- Positron Emission Tomography (PET)
- Ultrafast imaging and counting