

IR CRYSTAL PROPERTIES

MATERIAL	TRANSMISSION RANGE [cm ⁻¹]	ATR RANGE [cm ⁻¹]	REFRACTIVE INDEX (at 1000 cm ⁻¹)	DENSITY [g/cm ³]
KBr	7500 - 380	-	1.52	2.753
CaF ₂	7500 - 1111	-	1.4	3.18
NaCl	7500 - 625	-	1.49	2.17
BaF ₂	7500 - 740	-	1.42	4.83
ZnSe	7500 - 540	5100 - 650	2.4	5.27
Ge	5500 - 475	5500 - 675	4.0	5.32
Diamond	-	4200 - 350	2.4	3.51

MATERIAL	CLEANING	pH Range	DAMAGE CAUSING LIQUIDS	REMARKS
KBr	anhydrous solvents	-	aqueous solutions	hygroscopic, wide transmission range, susceptible to scratches
CaF ₂	alcohol, acetone, organic solvents	1 - 9	NH ₄ ⁺ salts, acids	withstands high pressure, resists most acids and bases, low solubility in water, susceptible to scratches, quite high absorption rate
NaCl	anhydrous solvents	-	aqueous solutions	hygroscopic, withstands thermal and mechanical shock
BaF ₂	alcohol, acetone	5 - 8	NH ₄ ⁺ salts, acids	susceptible to thermal and mechanical shock
ZnSe	alcohol, acetone, H ₂ O, organic solvents	5 - 9	acids, strong alkalies	susceptible to scratches, high transmittance
Ge	alcohol, acetone, H ₂ O, organic solvents	1 - 14	H ₂ SO ₄ , aqua regia	temp. sensitive (max. 80°C), suitable for samples with high refractive index
Diamond	alcohol, acetone, organic solvents	1 - 14	K ₂ Cr ₂ O ₇ , conc. H ₂ SO ₄	very hard, withstands high pressure, chemically inert

NOTE: Despite careful research, we do not accept any liability for the correctness of the information provided. Liability claims based on the use of the information are excluded in principle.