

High Density Inorganic Host Materials

#	Space Group	Z	Composition	Density [g/cm ³]	Crystal System
1	P12/A1	2	LuTaO ₄	9.75	monoclinic
2	IA3	16	Lu ₂ O ₃	9.51	cubic
3	I213	16	Lu ₂ O ₃	9.48	cubic
4	R3H	3	Lu ₄ Hf ₃ O ₁₂	9.04	trigonal/rhombohedral
5	P63/M	1	SrBa ₂ Lu ₂₂ O ₃₆	8.9	Hexagonal
6	PNMA	4	Lu ₃ O ₂ F ₅	8.74	Orthorhombic
7	P63	2	SrCa ₂ Lu ₁₀ O ₁₈	8.44	Hexagonal
8	PNMA	4	PrLuO ₃	8.42	Orthorhombic
9	PNMA	4	LaLuO ₃	8.17	Orthorhombic
10	PNAM	4	CaLu ₂ O ₄	8.1	Orthorhombic
11	R3H	3	Ba ₃ Lu ₄ O ₉	8.02	trigonal/rhombohedral
12	P121/C1	4	Lu ₂ SiO ₅	7.89	Monoclinic
13	IA3-D	8	Lu ₃ Ga ₅ O ₁₂	7.82	Cubic
14	P12/C1	2	CsLuW ₂ O ₈	7.7	Monoclinic
15	FD3-MZ	8	Lu ₂ V ₂ O ₇	7.65	Cubic
16	R3-MH	3	RbLuO ₂	7.6	trigonal/rhombohedral
17	P63/mmc	12	LuBO ₃ (vaterite)	7.42	Hexagonal
18	C12/C1	8	Lu ₂ SiO ₅	7.4	Monoclinic
19	P41212	4	Lu ₂ Ge ₂ O ₇	7.37	Tetragonal
20	P12/C1	2	Lu ₆ Ge ₄ O ₁₇	7.36	Monoclinic
21	PM3-M	1	BaLu _{0.5} Nb _{0.5} O ₃	7.22	Cubic
22		1	KLu ₃ F ₁₀	6.9	Cubic
23	R3-CH	6	LuBO ₃ (calcite)	6.86	trigonal/rhombohedral
24	IA3-D	8	Lu ₃ Al ₅ O ₁₂	6.7	Cubic
25	I41/AMDZ	4	LuPO ₄	6.55	Tetragonal
26	FM3-M	8	BaCaLu ₂ F ₁₀	6.54	Cubic
27	I41/AMDZ	4	LuPO ₄	6.46	Tetragonal
28	I41/AMDS	4	LuVO ₄	6.33	Tetragonal
29	C12/M1	2	Lu ₂ Si ₂ O ₇	6.25	Monoclinic