Li-Zn (Lithium-Zinc)

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The Li-Zn phase diagram in [Massalski2] was redrawn from [1991Pel], which is primarily based on [Hansen]. No new experimental data have been reported on this system since then, but [2008Lia] attempted to assess this system thermodynamically. Figure 1 shows the calculated Li-Zn phase diagram. Table 1 shows Li-Zn crystal structure data assembled by [1991Pel]. The composition range for each phase has been modified for consistency with Fig. 1.

References
1991Pel: A.D. Pelton, The Li-Zn (Lithium-Zinc) System, *J. Phase Equilib.*, 1991, **12**(1), p 42-45
2008Lia: Y. Liang, Z. Du, C. Guo, and C. Li, Thermodynamic Modeling of the Li-Zn System, *J. Alloys Compd.*, 2008, **455**, p 236-242

Table 1 Li-Zn crystal structure data

Phase	Composition, at.% Zn	Pearson symbol	Space group	Strukturbericht designation	Prototype
(βLi)	0-0.96	cI2	Im $\bar{3}m$	A2	W
LiZn	50-52.2	cF16	Fd $\bar{3}m$	B32	NaTl
βLi ₂ Zn ₃	45.5-67.6	...	...	...	...
αLi ₂ Zn ₃	56.2-60	c**	...	...	...
LiZn ₂	66.7	...	...	...	...
βLi ₂ Zn ₅	71.4-72.9	...	...	...	...
αLi ₂ Zn ₅	71.4	h**	...	...	...
βLiZn ₄	78.4-91.7	hP2	P6 ₃ /mmc	...	...
αLiZn ₄	80-84.7	h**	...	...	...
(Zn)	96.5-100	hP2	P6 ₃ /mmc	A3	Mg

Fig. 1 Li-Zn phase diagram