

$\text{Li}_6(\text{Li}_{0.65}\text{Al}_{0.35})_2\text{AlSi}_3$	<i>hP24</i>	(176) $P6_3/m - \text{ihdca}$
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Li_{14.6}Al_{3.4}Si₆ [1]

Structural features: Graphite-like (Li,Al)₂AlSi₃ layers and puckered hexagon-mesh (diamond-like) Li₆ layers alternate along [001].

Spina L. et al. (2003) [1]

Al_{1.69}Li_{7.31}Si₃

$a = 0.7549$, $c = 0.8097$ nm, $c/a = 1.073$, $V = 0.3996$ nm³, $Z = 2$

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
Li1	12 <i>i</i>	1	0.0064	0.3365	0.084		pseudo Frank-Kasper Li ₄ Si ₄ Al ₂
Si2	6 <i>h</i>	<i>m</i> ..	0.33762	0.32883	¹ / ₄		pentacapped trigonal prism Al ₂ Li ₈
Al3	2 <i>d</i>	-6..	² / ₃	¹ / ₃	¹ / ₄		tricapped trigonal prism Si ₃ Li ₆
M4	2 <i>c</i>	-6..	¹ / ₃	² / ₃	¹ / ₄		tricapped trigonal prism Si ₃ Li ₆
M5	2 <i>a</i>	-6..	0	0	¹ / ₄		tricapped trigonal prism Si ₃ Li ₆

M4 = 0.852Li + 0.148Al; M5 = 0.545Al + 0.455Li

Experimental: single crystal, diffractometer, X-rays, R = 0.036, T = 293 K

References: [1] Spina L., Tillard M., Belin C. (2003), Acta Crystallogr. C 59, i9-i10.