

Ni ₅ P ₄	<i>hP</i> 36	(186) <i>P</i> 6 ₃ <i>mc</i> – c ⁵ ba ²
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Ni₅P₄ [1]

Structural features: NiP₅ square pyramids and NiP₄ tetrahedra share atoms to form 3D-framework. One non-planar PP₃ trigonal unit for four single P atoms.

Elfström M. (1965) [1]

Ni₅P₄

a = 0.6789, *c* = 1.0986 nm, *c/a* = 1.618, *V* = 0.4385 nm³, *Z* = 4

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
P1	6 <i>c</i>	. <i>m</i> .	0.1777	0.8223	0.4406		pentagonal pyramid PNi ₅
Ni2	6 <i>c</i>	. <i>m</i> .	0.2078	0.7922	0.2365		11-vertex polyhedron P ₄ Ni ₇
Ni3	6 <i>c</i>	. <i>m</i> .	0.5357	0.4643	0.0872		10-vertex polyhedron P ₅ Ni ₅
Ni4	6 <i>c</i>	. <i>m</i> .	0.5418	0.4582	0.3775		10-vertex polyhedron P ₅ Ni ₅
P5	6 <i>c</i>	. <i>m</i> .	0.8181	0.1819	0.2306		7-vertex polyhedron Ni ₇
P6	2 <i>b</i>	3. <i>m</i> .	¹ / ₃	² / ₃	0.0556		9-vertex polyhedron Ni ₉
P7	2 <i>a</i>	3. <i>m</i> .	0	0	0.0000		tetrahedron NiP ₃
Ni8	2 <i>a</i>	3. <i>m</i> .	0	0	0.1989		7-vertex polyhedron P ₄ Ni ₃

Transformation from published data: origin shift 0 0 0.9128

Experimental: single crystal, Weissenberg photographs, X-rays, R = 0.100

Remarks: Refinement on diffraction data from [2]; cell parameters from the same reference.

References: [1] Elfström M. (1965), Acta Chem. Scand. 19, 1694-1704. [2] Larsson E. (1965), Ark. Kemi 23, 335-365.