

Ho₃Ni₁₀P_{6.5}*hP*46(176) *P*6₃/*m* – h⁷ca**Ho₆Ni₂₀P₁₃** [1]; U₃Ni₂₀P₁₃ [2]

Structural features: Infinite columns of base-linked P(Ni₄Ho₂)Ni₃ and P(Ni₂Ho₄)Ni₃ tricapped trigonal prisms share atoms to form a 3D-framework with AlB₂-type columns (7 prisms in the dented triangular cross-section); additional P (partial disorder, splitting of neighboring site) in channels of hexagonal cross-section parallel to [001].

Pivan J.Y. et al. (1986) [1]

Ho₃Ni₁₀P_{6.50}*a* = 1.2677, *c* = 0.373 nm, *c/a* = 0.294, *V* = 0.5191 nm³, *Z* = 2

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
P1	6 <i>h</i>	<i>m</i> ..	0.0497	0.2823	¹ / ₄		tricapped trigonal prism Ni ₅ Ho ₄
P2	6 <i>h</i>	<i>m</i> ..	0.1386	0.6139	¹ / ₄		
Ni3	6 <i>h</i>	<i>m</i> ..	0.155	0.0817	¹ / ₄	0.5	
Ni4	6 <i>h</i>	<i>m</i> ..	0.1973	0.105	¹ / ₄	0.5	
Ni5	6 <i>h</i>	<i>m</i> ..	0.24597	0.31983	¹ / ₄		cuboctahedron P ₄ Ni ₄ Ho ₄
Ni6	6 <i>h</i>	<i>m</i> ..	0.43651	0.02097	¹ / ₄		
Ho7	6 <i>h</i>	<i>m</i> ..	0.47031	0.28164	¹ / ₄		tricapped trigonal prism P ₃ Ho ₆
Ni8	2 <i>c</i>	-6..	¹ / ₃	² / ₃	¹ / ₄		
P9	2 <i>a</i>	-6..	0	0	¹ / ₄	0.5	

Transformation from published data: *y*,*x*,*-z*; origin shift 0 0 ¹/₂

Experimental: single crystal, diffractometer, X-rays, R = 0.023

Remarks: Short interatomic distances for partly occupied site(s).

References: [1] Pivan J.Y., Guérin R., Padiou J., Sergent M. (1986), J. Less-Common Met. 118, 191-200.

[2] Troc R., Kaczorowski D., Noel H., Le Bihan T. (1992), J. Alloys Compd. 184, L27-L31.