

Co	<i>hP46</i>	(186) $P6_3mc - c^6b^3a^2$
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Co δ [1]

Krainer E., Robitsch J. (1970) [1]

Co

$a = 0.8288$, $c = 1.0542$ nm, $c/a = 1.272$, $V = 0.6271$ nm³, $Z = 46$

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
Co1	6 <i>c</i>	. <i>m</i> .	0.1448	0.8552	0.3686		tricapped trigonal prism Co ₉
Co2	6 <i>c</i>	. <i>m</i> .	0.1846	0.8154	0.1376		bicapped square antiprism Co ₁₀
Co3	6 <i>c</i>	. <i>m</i> .	0.4740	0.5260	0.4242		pseudo Frank-Kasper Co ₁₁
Co4	6 <i>c</i>	. <i>m</i> .	0.5076	0.4924	0.1613		pseudo Frank-Kasper Co ₁₃
Co5	6 <i>c</i>	. <i>m</i> .	0.8060	0.1940	0.3696		pseudo Frank-Kasper Co ₁₁
Co6	6 <i>c</i>	. <i>m</i> .	0.8440	0.1560	0.1046		pseudo Frank-Kasper Co ₁₁
Co7	2 <i>b</i>	3 <i>m</i> .	$\frac{1}{3}$	$\frac{2}{3}$	0.0134		pseudo Frank-Kasper Co ₁₃
Co8	2 <i>b</i>	3 <i>m</i> .	$\frac{1}{3}$	$\frac{2}{3}$	0.2868		rhombic dodecahedron Co ₁₄
Co9	2 <i>b</i>	3 <i>m</i> .	$\frac{1}{3}$	$\frac{2}{3}$	0.5616		bicapped square prism Co ₁₀
Co10	2 <i>a</i>	3 <i>m</i> .	0	0	0.0		bicapped hexagonal prism Co ₁₄
Co11	2 <i>a</i>	3 <i>m</i> .	0	0	0.2371		14-vertex Frank-Kasper Co ₁₄

Transformation from published data: origin shift 0 0 0.3814

Experimental: thin film, diffractometer, X-rays, $R_B = 0.746$

Remarks: Thin layers obtained by spark erosion. Tentative structure (reliability factor $R = 0.746$ given twice). Space group (194) $P6_3/mmc$ was tested and rejected; the authors state that true symmetry is probably even lower.

References: [1] Krainer E., Robitsch J. (1970), Z. Metallkd. 61, 350-354.