

$\text{Be}_{15.34}\text{Rh}_{2.36}$ $hP19$ $(187) P-6m2 - \text{nki}^2\text{hgca}$ **RhBe_{6.6}** [1]

Structural features: Ignoring vacancies, Kagomé-mesh Be_3 layers alternate with puckered RhBe_2 and $(\text{Be}_2)\text{RhBe}$ layers (a RhBe hexagon mesh, the hexagons of which are centered by a Be_2 dumbbell perpendicular to the layer) along [001] (ratio 2:1 for the latter).

Johnson Q. et al. (1970) [1]

 $\text{Be}_{15.34}\text{Rh}_{2.36}$ $a = 0.4191$, $c = 1.0886$ nm, $c/a = 2.597$, $V = 0.1656$ nm³, $Z = 1$

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Be1	$6n$	$.m.$	0.1665	0.8335	0.1830		icosahedron Be_9Rh_3
Be2	$3k$	$mm2$	0.5045	0.4955	$\frac{1}{2}$		icosahedron $\text{Be}_{10}\text{Rh}_2$
Be3	$2i$	$3m.$	$\frac{2}{3}$	$\frac{1}{3}$	0.0982		14-vertex Frank-Kasper $\text{Be}_{10}\text{Rh}_4$
Rh4	$2i$	$3m.$	$\frac{2}{3}$	$\frac{1}{3}$	0.3069		16-vertex Frank-Kasper Be_{16}
Be5	$2h$	$3m.$	$\frac{1}{3}$	$\frac{2}{3}$	0.3408		icosahedron Be_9Rh_3
Be6	$2g$	$3m.$	0	0	0.3767		16-vertex Frank-Kasper $\text{Be}_{13}\text{Rh}_3$
Be7	$1c$	$-6m2$	$\frac{1}{3}$	$\frac{2}{3}$	0	0.34	15-vertex Frank-Kasper $\text{Be}_{12}\text{Rh}_3$
Rh8	$1a$	$-6m2$	0	0	0	0.36	15-vertex Frank-Kasper Be_{15}

Transformation from published data: origin shift $\frac{1}{3} \frac{2}{3} \frac{1}{2}$ Experimental: single crystal, diffractometer, X-rays, $R = 0.053$

Remarks: Occupation of site Be7 could not be stated with certainty. When relevant, we changed the last digit of the atom coordinates to respect the symmetry conditions for special positions.

References: [1] Johnson Q., Smith G.S., Krikorian O.H., Sands D.E. (1970), Acta Crystallogr. B 26, 109-113.