

K₆Ta₇O₁₅F₇*hP60*(175) *P6/m – lk²j⁵fea***K₆Ta_{7.05}O₁₅F₆(F,O)_{1.1}** [1]

Structural features: Ta(O₅F) octahedra share vertices to form a 3D-framework; additional Ta and F (partial disorder) and K in channels parallel to [001].

Arakcheeva A.V. et al. (2004) [1]

F_{7.10}K₆O₁₅Ta_{7.05}*a* = 1.3123, *c* = 0.38622 nm, *c/a* = 0.294, *V* = 0.5760 nm³, *Z* = 1

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
F1	12 <i>l</i>	1	0.038	0.134	0.312	0.092	
O2	6 <i>k</i>	<i>m</i> ..	0.1513	0.5048	¹ / ₂		non-colinear Ta ₂
K3	6 <i>k</i>	<i>m</i> ..	0.3434	0.0873	¹ / ₂		
F4	6 <i>j</i>	<i>m</i> ..	0.0882	0.347	0		coplanar triangle Ta ₃
Ta5	6 <i>j</i>	<i>m</i> ..	0.121	0.046	0	0.025	
Ta6	6 <i>j</i>	<i>m</i> ..	0.15587	0.52583	0		octahedron O ₅ F
Ta7	6 <i>j</i>	<i>m</i> ..	0.323	0.112	0	0.06	single atom F
O8	6 <i>j</i>	<i>m</i> ..	0.5341	0.2226	0		non-colinear Ta ₂
O9	3 <i>f</i>	2/ <i>m</i> ..	¹ / ₂	0	0		colinear Ta ₂
Ta10	2 <i>e</i>	6..	0	0	0.373	0.025	
Ta11	1 <i>a</i>	6/ <i>m</i> ..	0	0	0	0.487	

Transformation from published data: origin shift 0 0 ¹/₂

Experimental: single crystal, diffractometer, X-rays, R = 0.033

Remarks: Partial substitution by O on site F1 could not be excluded. Short interatomic distances for partly occupied site(s).

References: [1] Arakcheeva A.V., Chapuis G., Grinevich V.V., Shamrai V.F. (2004), Crystallogr. Rep. 49, 70-85 (Kristallografiya 49, 75-91).