$Rb_{15}Tl_{27}$	*hP*42	(189) *P*-62*m* – ji^{4}hgeda

$Rb_{15}Tl_{27}$ [1]
Structural features: Layers containing single Tl_{11} units (pentacapped trigonal prism) alternate with layers where similar units share prism edges and capping atoms.

Dong Z.C., Corbett J.D. (1996) [1]
$Rb_{15}Tl_{27}$
a = 1.03248, c = 1.7558 nm, c/a = 1.701, V = 1.6210 nm^3, Z = 1

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Tl1	6*j*	*m*..	0.2920	0.4639	0		icosahedron Tl_9Rb_3
Tl2	6*i*	..*m*	0.3801	0	0.1005		icosahedron Tl_7Rb_5
Rb3	6*i*	..*m*	0.388	0	0.3156		pseudo Frank-Kasper Tl_8Rb_5
Tl4	6*i*	..*m*	0.7145	0	0.4089		bicapped square antiprism Tl_4Rb_6
Rb5	6*i*	..*m*	0.73	0	0.1892		15-vertex Frank-Kasper Tl_9Rb_6
Tl6	4*h*	3..	$^1/_3$	$^2/_3$	0.1566		icosahedron Tl_6Rb_6
Tl7	3*g*	*m*2*m*	0.2123	0	$^1/_2$		icosahedron Tl_8Rb_4
Tl8	2*e*	3.*m*	0	0	0.3490		icosahedron Tl_6Rb_6
Rb9	2*d*	-6..	$^1/_3$	$^2/_3$	$^1/_2$		15-vertex polyhedron Tl_9Rb_6
Rb10	1*a*	-62*m*	0	0	0		pseudo Frank-Kasper $Tl_{12}Rb_6$

Transformation from published data: -*x*,-*y*,-*z*; origin shift 0 0 $^1/_2$
Experimental: single crystal, diffractometer, X-rays, wR = 0.048, T = 296 K

Remarks: Probably identical to the phase called $RbTl_2$ in [2]. Refinement of the site occupancies showed no significant deviation from unity. In table 1 of [1] the Hermann-Mauguin symbol for the space group is misprinted as *P*-6*m* instead of *P*-62*m* (given elsewhere).

References: [1] Dong Z.C., Corbett J.D. (1996), Inorg. Chem. 35, 1444-1450. [2] Thümmel R., Klemm W. (1970), Z. Anorg. Allg. Chem. 376, 44-63.