$H_{1.04}K_{1.54}Mg_{1.93}Si_{1.89}O_7$	*hP*26	(185) $P6_3cm$ – $c^2b^2a^3$

$K_{1.54}H_{1.04}Mg_{1.93}Si_{1.89}O_7$ [1], X phase
Structural features: Close-packed K_2O and O_3 layers in hc_2 stacking (partial vacancies ignored); Mg in octahedral, Si in tetrahedral voids. Infinite slabs of edge-linked MgO_6 octahedra containing 6-rings share vertices with units of two vertex-linked SiO_4 tetrahedra to form a 3D-framework (partial vacancies ignored); K in trigonal prismatic voids.

Yang H. et al. (2001) [1]
$K_{1.54}Mg_{1.93}O_7Si_{1.89}$
$a = 0.50812$, $c = 1.32112$ nm, $c/a = 2.600$, $V = 0.2954$ nm^3, $Z = 2$

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
O1	6*c*	..*m*	0.3081	0	0.1578		single atom Si
O2	6*c*	..*m*	0.6898	0	0.3402		single atom Si
K3	4*b*	3..	$^1/_3$	$^2/_3$	0.0016	0.77	anticuboctahedron O_9K_3
Mg4	4*b*	3..	$^1/_3$	$^2/_3$	0.2485	0.965	octahedron O_6
O5	2*a*	3.*m*	0	0	0.0		colinear Si_2
Si6	2*a*	3.*m*	0	0	0.1291	0.945	tetrahedron O_4
Si7	2*a*	3.*m*	0	0	0.3736	0.945	tetrahedron O_4

Transformation from published data: origin shift 0 0 0.2056
Experimental: single crystal, diffractometer, X-rays, R = 0.037

Remarks: High-pressure phase. H not located. Hydrogen atoms are not taken into consideration for Pearson symbol, Wyckoff sequence and atomic environments.

References: [1] Yang H., Konzett J., Prewitt C.T. (2001), Am. Mineral. 86, 1483-1488.