$(Ag_{0.73}Al_{0.27})_5Sm$	*hP*12	(189) *P*-62*m* – hgfe

$Sm(Ag_{0.73}Al_{0.27})_5$ [1]
Structural features: $Sm(Ag,Al)_2$ layers (an (Ag,Al) hexagon mesh, the hexagons of which are centered by a Sm atom) alternate with Kagomé-mesh $(Ag,Al)_3$ and triangle-mesh $(Ag,Al)_3$ layers along [001].

Zhak O.V. et al. (1999) [1]
$Ag_{3.67}Al_{1.33}Sm$
$a = 0.54081$, $c = 0.92583$ nm, $c/a = 1.712$, $V = 0.2345$ nm^3, $Z = 2$

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
M1	4*h*	3..	$^1/_3$	$^2/_3$	0.2592		icosahedron $Al_3Ag_6Sm_3$
M2	3*g*	*m*2*m*	0.3159	0	$^1/_2$		icosahedron $Ag_{10}Sm_2$
M3	3*f*	*m*2*m*	0.4675	0	0		icosahedron $Al_4Ag_4Sm_4$
Sm4	2*e*	3.*m*	0	0	0.2031		16-vertex Frank-Kasper Al_6Ag_9Sm

M1 = 0.89Ag + 0.11Al; M2 = 0.77Ag + 0.23Al; M3 = 0.51Al + 0.49Ag
Transformation from published data: origin shift 0 0 $^1/_2$
Experimental: powder, diffractometer, X-rays, R = 0.090

References: [1] Zhak O.V., Kuz'ma Y.B., Stel'makhovych B.M. (1999), J. Alloys Compd. 289, 181-184.