$Mg_4Zn_{10}(Zn_{0.5}Al_{0.5})_2$	*hP*19	(187) *P*-6*m*2 – nki^{2}hgca

$Mg_4Zn_{11}Al$ [1]
Structural features: Ignoring vacancies, Kagomé-mesh Zn_3 layers alternate with puckered Mg_2Zn and $(Zn_2)(Al,Zn)_2$ layers (an (Al,Zn) hexagon mesh, the hexagons of which are centered by a Zn_2 dumbbell perpendicular to the layer) along [001] (ratio 2:1 for the latter). Intergrowth of Laves- and Zr_4Al_3-type slabs in the ratio 2:1. Ordering variant of $RhBe_{6.6}$.

Auld J.H., Cousland S.M. (1974) [1]
$AlMg_4Zn_{11}$
a = 0.496, c = 1.402 nm, c/a = 2.827, V = 0.2987 nm^3, Z = 1

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
Zn1	6*n*	.*m*.	0.16667	0.83333	0.204	0.667	icosahedron $Zn_7Mg_3Al_2$
Zn2	3*k*	*mm*2	0.5	0.5	$^1/_2$	0.667	icosahedron Zn_6Mg_6
Zn3	2*i*	3*m*.	$^2/_3$	$^1/_3$	0.102		14-vertex Frank-Kasper Zn_7MgAl_6
Mg4	2*i*	3*m*.	$^2/_3$	$^1/_3$	0.317		16-vertex Frank-Kasper $Zn_{13}Mg_3$
Zn5	2*h*	3*m*.	$^1/_3$	$^2/_3$	0.352		icosahedron Zn_6Mg_6
Mg6	2*g*	3*m*.	0	0	0.387		16-vertex Frank-Kasper $Zn_{12}Mg_4$
M7	1*c*	-6*m*2	$^1/_3$	$^2/_3$	0		15-vertex Frank-Kasper Al_3Zn_{12}
M8	1*a*	-6*m*2	0	0	0		15-vertex Frank-Kasper Al_3Zn_{12}

M7 = 0.5Al + 0.5Zn; M8 = 0.5Al + 0.5Zn
Transformation from published data: origin shift 0 0 $^1/_2$
Experimental: single crystal, precession photographs, X-rays, R = 0.180

Remarks: Metastable phase referred to as η'-(AlMgZn).

References: [1] Auld J.H., Cousland S.M. (1974), J. Austr. Inst. Met. 19, 194-199.