$Y(Al_{0.5}Si_{0.5})N_{0.5}O_{2.5}$	*hP*20	(176) $P6_3/m - h^2fba$

Y_2AlSiO_5N [1]
Structural features: Triangle-mesh Y layers alternate with slabs containing randomly linked $(Al,Si)(O,N)_4$ tetrahedra.

Gonon M.F. et al. (2000) [1]
$Al_{0.50}N_{0.50}O_{2.50}Si_{0.50}Y$
a = 0.38351, c = 0.97512 nm, c/a = 2.543, V = 0.1242 nm^3, Z = 2

site	Wyck.	sym.	x	y	z	occ.	atomic environment
M1	6*h*	*m*..	0.186	0.596	$^1/_4$	0.333	
O2	6*h*	*m*..	0.374	0.145	$^1/_4$	0.167	non-colinear NAl
O3	4*f*	3..	$^1/_3$	$^2/_3$	0.101		
Y4	2*b*	-3..	0	0	0		square prism (cube) O_6N_2
N5	2*a*	-6..	0	0	$^1/_4$	0.5	coplanar triangle O_3

M1 = 0.5Al + 0.5Si
Experimental: powder, diffractometer, X-rays, R_B = 0.036

Remarks: Phase referred to as B-(AlNOSiY). Short interatomic distances for partly occupied site(s). Supersedes a model with 3-rings of vertex-linked tetrahedra proposed earlier by the same author [2].

References: [1] Gonon M.F., Descamps D.C., Cambier F., Thompson D.P. (2000), Mater. Sci. Forum 325/326, 325-333. [2] Thompson D.P. (1989), Mater. Sci. Forum 47, 21-42.