ZnS	*hP*32	(186) $P6_3mc$ – $b^{10}a^6$

ZnS 16H [1]
Structural features: Close-packed S layers in hc_7 stacking; Zn in tetrahedral voids (same stacking position as the preceding S layer). ZnS_4 tetrahedra share vertices to form a 3D-framework.

Mardix S. et al. (1967) [1]
SZn
a = 0.382, c = 5.008 nm, c/a = 13.11, V = 0.6329 nm^3, Z = 16

site	Wyck.	sym.	x	y	z	occ.	atomic environment
S1	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.01563		tetrahedron Zn_4
Zn2	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.0625		tetrahedron S_4
S3	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.20313		tetrahedron Zn_4
Zn4	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.25		tetrahedron S_4
S5	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.39063		tetrahedron Zn_4
Zn6	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.4375		tetrahedron S_4
S7	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.64063		tetrahedron Zn_4
Zn8	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.6875		tetrahedron S_4
S9	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.82813		tetrahedron Zn_4
Zn10	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.875		tetrahedron S_4
Zn11	2*a*	3*m*.	0	0	0.0		tetrahedron S_4
S12	2*a*	3*m*.	0	0	0.07813		tetrahedron Zn_4
Zn13	2*a*	3*m*.	0	0	0.125		tetrahedron S_4
S14	2*a*	3*m*.	0	0	0.26563		tetrahedron Zn_4
Zn15	2*a*	3*m*.	0	0	0.3125		tetrahedron S_4
S16	2*a*	3*m*.	0	0	0.45313		tetrahedron Zn_4

Transformation from published data: origin shift 0 0 0.48438
Experimental: single crystal, oscillation photographs, X-rays

Remarks: Zhdanov notation (88). We derived the cell parameters and idealized atom coordinates from the stacking sequence.

References: [1] Mardix S., Alexander E., Brafman O., Steinberger I.T. (1967), Acta Crystallogr. 22, 808-812.