ZnS	*hP*20	(186) $P6_3mc$ – b^6a^4

ZnS 10H [1], wurtzite-10H
Structural features: Close-packed S layers in hc_4 stacking; Zn in tetrahedral voids (same stacking position as the preceding S layer). ZnS_4 tetrahedra share vertices to form a 3D-framework.

Evans H.T. Jr., McKnight E.T. (1959) [1]
SZn
$a = 0.3824$, $c = 3.120$ nm, $c/a = 8.159$, $V = 0.3951$ nm^3, $Z = 10$

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
Zn1	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.025		tetrahedron S_4
S2	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.1		tetrahedron Zn_4
Zn3	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.325		tetrahedron S_4
S4	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.4		tetrahedron Zn_4
Zn5	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.725		tetrahedron S_4
S6	2*b*	3*m*.	$^1/_3$	$^2/_3$	0.8		tetrahedron Zn_4
S7	2*a*	3*m*.	0	0	0.0		tetrahedron Zn_4
Zn8	2*a*	3*m*.	0	0	0.125		tetrahedron S_4
S9	2*a*	3*m*.	0	0	0.2		tetrahedron Zn_4
Zn10	2*a*	3*m*.	0	0	0.425		tetrahedron S_4

Transformation from published data: origin shift 0 0 0.375
Experimental: single crystal, precession photographs, X-rays

Remarks: Natural specimen from the Zig Zag mine, Joplin, Missouri. Zhdanov notation (55); idealized coordinates.

References: [1] Evans H.T. Jr., McKnight E.T. (1959), Am. Mineral. 44, 1210-1218.