

MSG No. 43.228 F_{Sdd2} [Type IV, orthorhombic]

Table 1: Wyckoff site: **16a**, site symmetry: $\dots 2$

No.	position	mapping
1	$[0, 0, z]$	[1,2]
2	$[\frac{1}{4}, \frac{1}{4}, z + \frac{1}{4}]$	[3,4]
3	$[0, \frac{1}{2}, z + \frac{1}{2}]$	[5,6]
4	$[\frac{1}{4}, \frac{3}{4}, z + \frac{3}{4}]$	[7,8]
5	$[\frac{1}{2}, 0, z + \frac{1}{2}]$	[9,10]
6	$[\frac{3}{4}, \frac{1}{4}, z + \frac{3}{4}]$	[11,12]
7	$[\frac{1}{2}, \frac{1}{2}, z]$	[13,14]
8	$[\frac{3}{4}, \frac{3}{4}, z + \frac{1}{4}]$	[15,16]
9	$[0, 0, z + \frac{1}{2}]$	[17,18]
10	$[\frac{1}{4}, \frac{1}{4}, z + \frac{3}{4}]$	[19,20]
11	$[0, \frac{1}{2}, z]$	[21,22]
12	$[\frac{1}{4}, \frac{3}{4}, z + \frac{1}{4}]$	[23,24]
13	$[\frac{1}{2}, 0, z]$	[25,26]
14	$[\frac{3}{4}, \frac{1}{4}, z + \frac{1}{4}]$	[27,28]
15	$[\frac{1}{2}, \frac{1}{2}, z + \frac{1}{2}]$	[29,30]
16	$[\frac{3}{4}, \frac{3}{4}, z + \frac{3}{4}]$	[31,32]

Table 2: Wyckoff site: **16b**, site symmetry: $\dots 2'$

No.	position	mapping
1	$[0, \frac{1}{4}, z]$	[1,22]
2	$[0, \frac{3}{4}, z]$	[2,21]
3	$[\frac{1}{4}, \frac{1}{2}, z + \frac{1}{4}]$	[3,24]
4	$[\frac{1}{4}, 0, z + \frac{1}{4}]$	[4,23]
5	$[0, \frac{3}{4}, z + \frac{1}{2}]$	[5,18]
6	$[0, \frac{1}{4}, z + \frac{1}{2}]$	[6,17]
7	$[\frac{1}{4}, 0, z + \frac{3}{4}]$	[7,20]
8	$[\frac{1}{4}, \frac{1}{2}, z + \frac{3}{4}]$	[8,19]
9	$[\frac{1}{2}, \frac{1}{4}, z + \frac{1}{2}]$	[9,30]
10	$[\frac{1}{2}, \frac{3}{4}, z + \frac{1}{2}]$	[10,29]
11	$[\frac{3}{4}, \frac{1}{2}, z + \frac{3}{4}]$	[11,32]
12	$[\frac{3}{4}, 0, z + \frac{3}{4}]$	[12,31]
13	$[\frac{1}{2}, \frac{3}{4}, z]$	[13,26]
14	$[\frac{1}{2}, \frac{1}{4}, z]$	[14,25]
15	$[\frac{3}{4}, 0, z + \frac{1}{4}]$	[15,28]
16	$[\frac{3}{4}, \frac{1}{2}, z + \frac{1}{4}]$	[16,27]

Table 3: Wyckoff site: 32c, site symmetry: 1

No.	position	mapping
1	$[x, y, z]$	[1]
2	$[-x, -y, z]$	[2]
3	$[\frac{1}{4} - x, y + \frac{1}{4}, z + \frac{1}{4}]$	[3]
4	$[x + \frac{1}{4}, \frac{1}{4} - y, z + \frac{1}{4}]$	[4]
5	$[x, y + \frac{1}{2}, z + \frac{1}{2}]$	[5]
6	$[-x, \frac{1}{2} - y, z + \frac{1}{2}]$	[6]
7	$[\frac{1}{4} - x, y + \frac{3}{4}, z + \frac{3}{4}]$	[7]
8	$[x + \frac{1}{4}, \frac{3}{4} - y, z + \frac{3}{4}]$	[8]
9	$[x + \frac{1}{2}, y, z + \frac{1}{2}]$	[9]
10	$[\frac{1}{2} - x, -y, z + \frac{1}{2}]$	[10]
11	$[\frac{3}{4} - x, y + \frac{1}{4}, z + \frac{3}{4}]$	[11]
12	$[x + \frac{3}{4}, \frac{1}{4} - y, z + \frac{3}{4}]$	[12]
13	$[x + \frac{1}{2}, y + \frac{1}{2}, z]$	[13]
14	$[\frac{1}{2} - x, \frac{1}{2} - y, z]$	[14]
15	$[\frac{3}{4} - x, y + \frac{3}{4}, z + \frac{1}{4}]$	[15]
16	$[x + \frac{3}{4}, \frac{3}{4} - y, z + \frac{1}{4}]$	[16]
17	$[x, y, z + \frac{1}{2}]$	[17]
18	$[-x, -y, z + \frac{1}{2}]$	[18]
19	$[\frac{1}{4} - x, y + \frac{1}{4}, z + \frac{3}{4}]$	[19]
20	$[x + \frac{1}{4}, \frac{1}{4} - y, z + \frac{3}{4}]$	[20]
21	$[x, y + \frac{1}{2}, z]$	[21]
22	$[-x, \frac{1}{2} - y, z]$	[22]
23	$[\frac{1}{4} - x, y + \frac{3}{4}, z + \frac{1}{4}]$	[23]
24	$[x + \frac{1}{4}, \frac{3}{4} - y, z + \frac{1}{4}]$	[24]
25	$[x + \frac{1}{2}, y, z]$	[25]
26	$[\frac{1}{2} - x, -y, z]$	[26]
27	$[\frac{3}{4} - x, y + \frac{1}{4}, z + \frac{1}{4}]$	[27]
28	$[x + \frac{3}{4}, \frac{1}{4} - y, z + \frac{1}{4}]$	[28]
29	$[x + \frac{1}{2}, y + \frac{1}{2}, z + \frac{1}{2}]$	[29]
30	$[\frac{1}{2} - x, \frac{1}{2} - y, z + \frac{1}{2}]$	[30]
31	$[\frac{3}{4} - x, y + \frac{3}{4}, z + \frac{3}{4}]$	[31]
32	$[x + \frac{3}{4}, \frac{3}{4} - y, z + \frac{3}{4}]$	[32]