

MSG No. 16.6  $P_I222$  [ Type IV, orthorhombic ]

Table 1: Wyckoff site: 2a, site symmetry: 222

No.	position	mapping
1	$[0, 0, 0]$	$[1, 2, 3, 4]$
2	$[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}]$	$[5, 6, 7, 8]$

Table 2: Wyckoff site: 2b, site symmetry: 222

No.	position	mapping
1	$[\frac{1}{2}, 0, 0]$	$[1, 2, 3, 4]$
2	$[0, \frac{1}{2}, \frac{1}{2}]$	$[5, 6, 7, 8]$

Table 3: Wyckoff site: 2c, site symmetry: 222

No.	position	mapping
1	$[0, 0, \frac{1}{2}]$	$[1, 2, 3, 4]$
2	$[\frac{1}{2}, \frac{1}{2}, 0]$	$[5, 6, 7, 8]$

Table 4: Wyckoff site: 2d, site symmetry: 222

No.	position	mapping
1	$[0, \frac{1}{2}, 0]$	$[1, 2, 3, 4]$
2	$[\frac{1}{2}, 0, \frac{1}{2}]$	$[5, 6, 7, 8]$

Table 5: Wyckoff site: 4e, site symmetry: 2..

No.	position	mapping
1	$[x, 0, 0]$	$[1, 2]$
2	$[-x, 0, 0]$	$[3, 4]$
3	$[x + \frac{1}{2}, \frac{1}{2}, \frac{1}{2}]$	$[5, 6]$
4	$[\frac{1}{2} - x, \frac{1}{2}, \frac{1}{2}]$	$[7, 8]$

Table 6: Wyckoff site:  $4f$ , site symmetry:  $2..$ 

No.	position	mapping
1	$[x, 0, \frac{1}{2}]$	[1,2]
2	$[-x, 0, \frac{1}{2}]$	[3,4]
3	$[x + \frac{1}{2}, \frac{1}{2}, 0]$	[5,6]
4	$[\frac{1}{2} - x, \frac{1}{2}, 0]$	[7,8]

Table 7: Wyckoff site:  $4g$ , site symmetry:  $.2.$ 

No.	position	mapping
1	$[0, y, 0]$	[1,3]
2	$[0, -y, 0]$	[2,4]
3	$[\frac{1}{2}, y + \frac{1}{2}, \frac{1}{2}]$	[5,7]
4	$[\frac{1}{2}, \frac{1}{2} - y, \frac{1}{2}]$	[6,8]

Table 8: Wyckoff site:  $4h$ , site symmetry:  $.2.$ 

No.	position	mapping
1	$[\frac{1}{2}, y, 0]$	[1,3]
2	$[\frac{1}{2}, -y, 0]$	[2,4]
3	$[0, y + \frac{1}{2}, \frac{1}{2}]$	[5,7]
4	$[0, \frac{1}{2} - y, \frac{1}{2}]$	[6,8]

Table 9: Wyckoff site:  $4i$ , site symmetry:  $..2$ 

No.	position	mapping
1	$[0, 0, z]$	[1,4]
2	$[0, 0, -z]$	[2,3]
3	$[\frac{1}{2}, \frac{1}{2}, z + \frac{1}{2}]$	[5,8]
4	$[\frac{1}{2}, \frac{1}{2}, \frac{1}{2} - z]$	[6,7]

Table 10: Wyckoff site:  $4j$ , site symmetry:  $..2$ 

No.	position	mapping
1	$[0, \frac{1}{2}, z]$	[1,4]
2	$[0, \frac{1}{2}, -z]$	[2,3]
3	$[\frac{1}{2}, 0, z + \frac{1}{2}]$	[5,8]
4	$[\frac{1}{2}, 0, \frac{1}{2} - z]$	[6,7]

Table 11: Wyckoff site:  $8k$ , site symmetry:  $1$ 

No.	position	mapping
1	$[x, y, z]$	[1]
2	$[x, -y, -z]$	[2]
3	$[-x, y, -z]$	[3]
4	$[-x, -y, z]$	[4]
5	$[x + \frac{1}{2}, y + \frac{1}{2}, z + \frac{1}{2}]$	[5]
6	$[x + \frac{1}{2}, \frac{1}{2} - y, \frac{1}{2} - z]$	[6]
7	$[\frac{1}{2} - x, y + \frac{1}{2}, \frac{1}{2} - z]$	[7]
8	$[\frac{1}{2} - x, \frac{1}{2} - y, z + \frac{1}{2}]$	[8]