

MSG No. 12.58 $C2/m$ [Type I, monoclinic]

Table 1: Wyckoff site: 2a, site symmetry: $2/m$

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

Table 2: Wyckoff site: 2b, site symmetry: $2/m$

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

Table 3: Wyckoff site: 2c, site symmetry: $2/m$

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

Table 4: Wyckoff site: 2d, site symmetry: $2/m$

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

Table 5: Wyckoff site: 4e, site symmetry: -1

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

Table 6: Wyckoff site: $4\mathbf{f}$, site symmetry: -1

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

Table 7: Wyckoff site: $4\mathbf{g}$, site symmetry: 2

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

Table 8: Wyckoff site: $4\mathbf{h}$, site symmetry: 2

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

Table 9: Wyckoff site: $4\mathbf{i}$, site symmetry: \mathbf{m}

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

Table 10: Wyckoff site: $8\mathbf{j}$, 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]

continued ...

Table 10

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