

MSG No. 49.268 $Pccm'$ [Type III, orthorhombic]

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

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

Table 2: Wyckoff site: 2b, site symmetry: $\dots 2/m'$

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

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

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

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

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

Table 5: Wyckoff site: 2e, site symmetry: $2'2'2$

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

Table 6: Wyckoff site: 2f, site symmetry: $2'2'2$

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

Table 7: Wyckoff site: 2g, site symmetry: 2'2'2

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

Table 8: Wyckoff site: 2h, site symmetry: 2'2'2

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

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

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

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

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

Table 11: Wyckoff site: 4k, site symmetry: ..2'.

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

Table 12: Wyckoff site: 4l, site symmetry: .2'.

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

Table 13: Wyckoff site: 4m, site symmetry: ..2

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

Table 14: Wyckoff site: 4n, site symmetry: ...2

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

Table 15: Wyckoff site: 4o, site symmetry: ...2

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

Table 16: Wyckoff site: 4p, site symmetry: ...2

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

Table 17: Wyckoff site: **4q**, site symmetry: **..m'**

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

Table 18: Wyckoff site: **8r**, site symmetry: **1**

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