MSG No. 63.457 $Cmcm$ [Type I, orthorhombic]

Table 1: Wyckoff site: `4a`, site symmetry: `2/m..`

No.	position	mapping
1	$[0,\ 0,\ 0]$	`[1,2,5,6]`
2	$\left[0,\ 0,\ \frac{1}{2}\right]$	`[3,4,7,8]`
3	$\left[\frac{1}{2},\ \frac{1}{2},\ 0\right]$	`[9,10,13,14]`
4	$\left[\frac{1}{2},\ \frac{1}{2},\ \frac{1}{2}\right]$	`[11,12,15,16]`

Table 2: Wyckoff site: `4b`, site symmetry: `2/m..`

No.	position	mapping
1	$\left[0,\ \frac{1}{2},\ 0\right]$	`[1,2,5,6]`
2	$\left[0,\ \frac{1}{2},\ \frac{1}{2}\right]$	`[3,4,7,8]`
3	$\left[\frac{1}{2},\ 0,\ 0\right]$	`[9,10,13,14]`
4	$\left[\frac{1}{2},\ 0,\ \frac{1}{2}\right]$	`[11,12,15,16]`

Table 3: Wyckoff site: `4c`, site symmetry: `m2m`

No.	position	mapping
1	$\left[0,\ y,\ \frac{1}{4}\right]$	`[1,3,6,8]`
2	$\left[0,\ -y,\ \frac{3}{4}\right]$	`[2,4,5,7]`
3	$\left[\frac{1}{2},\ y+\frac{1}{2},\ \frac{1}{4}\right]$	`[9,11,14,16]`
4	$\left[\frac{1}{2},\ \frac{1}{2}-y,\ \frac{3}{4}\right]$	`[10,12,13,15]`

Table 4: Wyckoff site: `8d`, site symmetry: `-1`

No.	position	mapping
1	$\left[\frac{1}{4},\ \frac{1}{4},\ 0\right]$	`[1,13]`
2	$\left[\frac{1}{4},\ \frac{3}{4},\ 0\right]$	`[2,14]`
3	$\left[\frac{3}{4},\ \frac{1}{4},\ \frac{1}{2}\right]$	`[3,15]`
4	$\left[\frac{3}{4},\ \frac{3}{4},\ \frac{1}{2}\right]$	`[4,16]`
5	$\left[\frac{3}{4},\ \frac{3}{4},\ 0\right]$	`[5,9]`
6	$\left[\frac{3}{4},\ \frac{1}{4},\ 0\right]$	`[6,10]`
7	$\left[\frac{1}{4},\ \frac{3}{4},\ \frac{1}{2}\right]$	`[7,11]`
8	$\left[\frac{1}{4},\ \frac{1}{4},\ \frac{1}{2}\right]$	`[8,12]`

Table 5: Wyckoff site: `8e`, site symmetry: `2..`

No.	position	mapping
1	$[x,\ 0,\ 0]$	`[1,2]`
2	$\left[-x,\ 0,\ \frac{1}{2}\right]$	`[3,4]`
3	$[-x,\ 0,\ 0]$	`[5,6]`
4	$\left[x,\ 0,\ \frac{1}{2}\right]$	`[7,8]`
5	$\left[x+\frac{1}{2},\ \frac{1}{2},\ 0\right]$	`[9,10]`
6	$\left[\frac{1}{2}-x,\ \frac{1}{2},\ \frac{1}{2}\right]$	`[11,12]`
7	$\left[\frac{1}{2}-x,\ \frac{1}{2},\ 0\right]$	`[13,14]`
8	$\left[x+\frac{1}{2},\ \frac{1}{2},\ \frac{1}{2}\right]$	`[15,16]`

Table 6: Wyckoff site: `8f`, site symmetry: `m..`

No.	position	mapping
1	$[0,\ y,\ z]$	`[1,6]`
2	$[0,\ -y,\ -z]$	`[2,5]`
3	$\left[0,\ y,\ \frac{1}{2}-z\right]$	`[3,8]`
4	$\left[0,\ -y,\ z+\frac{1}{2}\right]$	`[4,7]`
5	$\left[\frac{1}{2},\ y+\frac{1}{2},\ z\right]$	`[9,14]`
6	$\left[\frac{1}{2},\ \frac{1}{2}-y,\ -z\right]$	`[10,13]`
7	$\left[\frac{1}{2},\ y+\frac{1}{2},\ \frac{1}{2}-z\right]$	`[11,16]`
8	$\left[\frac{1}{2},\ \frac{1}{2}-y,\ z+\frac{1}{2}\right]$	`[12,15]`

Table 7: Wyckoff site: `8g`, site symmetry: `..m`

No.	position	mapping
1	$\left[x,\ y,\ \frac{1}{4}\right]$	`[1,8]`
2	$\left[x,\ -y,\ \frac{3}{4}\right]$	`[2,7]`
3	$\left[-x,\ y,\ \frac{1}{4}\right]$	`[3,6]`
4	$\left[-x,\ -y,\ \frac{3}{4}\right]$	`[4,5]`
5	$\left[x+\frac{1}{2},\ y+\frac{1}{2},\ \frac{1}{4}\right]$	`[9,16]`
6	$\left[x+\frac{1}{2},\ \frac{1}{2}-y,\ \frac{3}{4}\right]$	`[10,15]`
7	$\left[\frac{1}{2}-x,\ y+\frac{1}{2},\ \frac{1}{4}\right]$	`[11,14]`
8	$\left[\frac{1}{2}-x,\ \frac{1}{2}-y,\ \frac{3}{4}\right]$	`[12,13]`

Table 8: Wyckoff site: `16h`, site symmetry: `1`

No.	position	mapping
1	$[x,\ y,\ z]$	`[1]`
2	$[x,\ -y,\ -z]$	`[2]`
3	$\left[-x,\ y,\ \frac{1}{2}-z\right]$	`[3]`

continued ...

Table 8

No.	position	mapping
4	$\left[-x,\, -y,\, z+\frac{1}{2}\right]$	[4]
5	$[-x,\, -y,\, -z]$	[5]
6	$[-x,\, y,\, z]$	[6]
7	$\left[x,\, -y,\, z+\frac{1}{2}\right]$	[7]
8	$\left[x,\, y,\, \frac{1}{2}-z\right]$	[8]
9	$\left[x+\frac{1}{2},\, y+\frac{1}{2},\, z\right]$	[9]
10	$\left[x+\frac{1}{2},\, \frac{1}{2}-y,\, -z\right]$	[10]
11	$\left[\frac{1}{2}-x,\, y+\frac{1}{2},\, \frac{1}{2}-z\right]$	[11]
12	$\left[\frac{1}{2}-x,\, \frac{1}{2}-y,\, z+\frac{1}{2}\right]$	[12]
13	$\left[\frac{1}{2}-x,\, \frac{1}{2}-y,\, -z\right]$	[13]
14	$\left[\frac{1}{2}-x,\, y+\frac{1}{2},\, z\right]$	[14]
15	$\left[x+\frac{1}{2},\, \frac{1}{2}-y,\, z+\frac{1}{2}\right]$	[15]
16	$\left[x+\frac{1}{2},\, y+\frac{1}{2},\, \frac{1}{2}-z\right]$	[16]