MSG No. 83.43 $P4/m$ [Type I, tetragonal]

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

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

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

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

Table 3: Wyckoff site: 1c, site symmetry: 4/m..

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

Table 4: Wyckoff site: 1d, site symmetry: 4/m..

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

Table 5: Wyckoff site: 2e, site symmetry: 2/m..

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

Table 6: Wyckoff site: 2f, site symmetry: 2/m..

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

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

No.	position	mapping
1	$[0, 0, z]$	[1,2,3,4]
2	$[0, 0, -z]$	[5,6,7,8]

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

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

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

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

Table 10: Wyckoff site: `4j`, site symmetry: `m..`

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

Table 11: Wyckoff site: `4k`, site symmetry: `m..`

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

Table 12: Wyckoff site: `8l`, site symmetry: `1`

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

1	$[x,\, y,\, z]$	[1]
2	$[-y,\, x,\, z]$	[2]
3	$[y,\, -x,\, z]$	[3]