# MSG No. 25.61 $P_cmm2$ [ Type IV, orthorhombic ]

Table 1: Wyckoff site: `2a`, site symmetry: `mm2`

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

Table 2: Wyckoff site: `2b`, site symmetry: `mm2`

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

Table 3: Wyckoff site: `2c`, site symmetry: `mm2`

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

Table 4: Wyckoff site: `2d`, site symmetry: `mm2`

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

Table 5: Wyckoff site: `4e`, site symmetry: `.m.`

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

Table 6: Wyckoff site: `4f`, site symmetry: `.m.`

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

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

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

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

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

Table 9: Wyckoff site: `8i`, 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 | $\left[x,\ y,\ z+\frac{1}{2}\right]$ | `[5]` |
| 6 | $\left[-x,\ -y,\ z+\frac{1}{2}\right]$ | `[6]` |
| 7 | $\left[-x,\ y,\ z+\frac{1}{2}\right]$ | `[7]` |
| 8 | $\left[x,\ -y,\ z+\frac{1}{2}\right]$ | `[8]` |