

MSG No. 27.82 $P_{cc}2$ [Type IV, orthorhombic]

Table 1: Wyckoff site: 2a, site symmetry: $\bar{m}'\bar{m}'2$

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

Table 2: Wyckoff site: 2b, site symmetry: $\bar{m}'\bar{m}'2$

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

Table 3: Wyckoff site: 2c, site symmetry: $\bar{m}'\bar{m}'2$

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

Table 4: Wyckoff site: 2d, site symmetry: $\bar{m}'\bar{m}'2$

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

Table 5: Wyckoff site: 4e, site symmetry: $.\bar{m}'.$

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

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

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

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

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

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

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

Table 9: Wyckoff site: 8i, site symmetry: 1

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