

MPG No. 27.8.156 $6'/mmm'$ (6'/mm'm setting) [Type III, hexagonal]

Table 1: Wyckoff site: 1o, site symmetry: $6'/\text{mm'm}$

No.	position	mapping
1	[0, 0, 0]	[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24]

Table 2: Wyckoff site: 2a, site symmetry: $6'\text{m'm}$

No.	position	mapping
1	[0, 0, z]	[1,2,3,10,11,12,13,14,15,22,23,24]
2	[0, 0, -z]	[4,5,6,7,8,9,16,17,18,19,20,21]

Table 3: Wyckoff site: 6b, site symmetry: m2m

No.	position	mapping
1	[x, 0, 0]	[1,8,16,23]
2	[0, x, 0]	[2,9,17,24]
3	[-x, -x, 0]	[3,7,18,22]
4	[-x, 0, 0]	[5,10,14,19]
5	[0, -x, 0]	[6,11,15,20]
6	[x, x, 0]	[4,12,13,21]

Table 4: Wyckoff site: 6c, site symmetry: mm'2

No.	position	mapping
1	[x, 2x, 0]	[1,5,8,10]
2	[-2x, -x, 0]	[2,6,9,11]
3	[x, -x, 0]	[3,4,7,12]
4	[-x, -2x, 0]	[14,16,19,23]
5	[2x, x, 0]	[15,17,20,24]
6	[-x, x, 0]	[13,18,21,22]

Table 5: Wyckoff site: 12d, site symmetry: $\dots\text{m}$

No.	position	mapping
1	[x, 0, z]	[1,23]
2	[0, x, z]	[2,24]
3	[-x, -x, z]	[3,22]

continued ...

Table 5

No.	position	mapping
4	$[-x, 0, z]$	[10,14]
5	$[0, -x, z]$	[11,15]
6	$[x, x, z]$	[12,13]
7	$[0, x, -z]$	[9,17]
8	$[x, 0, -z]$	[8,16]
9	$[-x, -x, -z]$	[7,18]
10	$[0, -x, -z]$	[6,20]
11	$[-x, 0, -z]$	[5,19]
12	$[x, x, -z]$	[4,21]

Table 6: Wyckoff site: 12e, site symmetry: .m'.

No.	position	mapping
1	$[x, 2x, z]$	[1,10]
2	$[-2x, -x, z]$	[2,11]
3	$[x, -x, z]$	[3,12]
4	$[-x, -2x, z]$	[14,23]
5	$[2x, x, z]$	[15,24]
6	$[-x, x, z]$	[13,22]
7	$[2x, x, -z]$	[17,20]
8	$[-x, -2x, -z]$	[16,19]
9	$[-x, x, -z]$	[18,21]
10	$[-2x, -x, -z]$	[6,9]
11	$[x, 2x, -z]$	[5,8]
12	$[x, -x, -z]$	[4,7]

Table 7: Wyckoff site: 12f, site symmetry: m..

No.	position	mapping
1	$[x, y, 0]$	[1,8]
2	$[-y, x - y, 0]$	[2,9]
3	$[-x + y, -x, 0]$	[3,7]
4	$[-x, -y, 0]$	[14,19]
5	$[y, -x + y, 0]$	[15,20]
6	$[x - y, x, 0]$	[13,21]
7	$[y, x, 0]$	[17,24]
8	$[x - y, -y, 0]$	[16,23]
9	$[-x, -x + y, 0]$	[18,22]
10	$[-y, -x, 0]$	[6,11]
11	$[-x + y, y, 0]$	[5,10]
12	$[x, x - y, 0]$	[4,12]

Table 8: Wyckoff site: 24g, site symmetry: 1

No.	position	mapping
1	$[x, y, z]$	[1]
2	$[-y, x - y, z]$	[2]
3	$[-x + y, -x, z]$	[3]
4	$[-x, -y, z]$	[14]
5	$[y, -x + y, z]$	[15]
6	$[x - y, x, z]$	[13]
7	$[y, x, -z]$	[17]
8	$[x - y, -y, -z]$	[16]
9	$[-x, -x + y, -z]$	[18]
10	$[-y, -x, -z]$	[6]
11	$[-x + y, y, -z]$	[5]
12	$[x, x - y, -z]$	[4]
13	$[-x, -y, -z]$	[19]
14	$[y, -x + y, -z]$	[20]
15	$[x - y, x, -z]$	[21]
16	$[x, y, -z]$	[8]
17	$[-y, x - y, -z]$	[9]
18	$[-x + y, -x, -z]$	[7]
19	$[-y, -x, z]$	[11]
20	$[-x + y, y, z]$	[10]
21	$[x, x - y, z]$	[12]
22	$[y, x, z]$	[24]
23	$[x - y, -y, z]$	[23]
24	$[-x, -x + y, z]$	[22]