SG No. 47 D_{2h}^{1} $Pmmm$ [orthorhombic]

* plus set: + [0, 0, 0]

Table 1: Wyckoff site: `1a`, site symmetry: `mmm`

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

Table 2: Wyckoff site: `1b`, site symmetry: `mmm`

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

Table 3: Wyckoff site: `1c`, site symmetry: `mmm`

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

Table 4: Wyckoff site: `1d`, site symmetry: `mmm`

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

Table 5: Wyckoff site: `1e`, site symmetry: `mmm`

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

Table 6: Wyckoff site: `1f`, site symmetry: `mmm`

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

Table 7: Wyckoff site: 1g, site symmetry: mmm

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

Table 8: Wyckoff site: 1h, site symmetry: mmm

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

Table 9: Wyckoff site: 2i, site symmetry: 2mm

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

Table 10: Wyckoff site: 2j, site symmetry: 2mm

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

Table 11: Wyckoff site: 2k, site symmetry: 2mm

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

Table 12: Wyckoff site: 2l, site symmetry: 2mm

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

Table 13: Wyckoff site: 2m, site symmetry: m2m

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

Table 14: Wyckoff site: 2n, site symmetry: m2m

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

Table 15: Wyckoff site: 2o, site symmetry: m2m

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

Table 16: Wyckoff site: 2p, site symmetry: m2m

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

Table 17: Wyckoff site: 2q, site symmetry: mm2

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

Table 18: Wyckoff site: 2r, site symmetry: mm2

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

Table 19: Wyckoff site: 2s, site symmetry: mm2

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

Table 20: Wyckoff site: 2t, site symmetry: mm2

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

Table 21: Wyckoff site: 4u, site symmetry: m..

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

Table 22: Wyckoff site: 4v, site symmetry: m..

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

Table 23: Wyckoff site: 4w, site symmetry: .m.

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

Table 24: Wyckoff site: `4x`, site symmetry: `.m.`

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

Table 25: Wyckoff site: `4y`, site symmetry: `..m`

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

Table 26: Wyckoff site: `4z`, site symmetry: `..m`

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

Table 27: Wyckoff site: `8A`, 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	$[-x,\ -y,\ -z]$	`[5]`
6	$[x,\ y,\ -z]$	`[6]`
7	$[x,\ -y,\ z]$	`[7]`
8	$[-x,\ y,\ z]$	`[8]`