SG No. 17 D_2^2 $P222_1$ [orthorhombic]

* plus set: $+[0,\ 0,\ 0]$
* Wyckoff site: `2a`, site symmetry: `2..`

Table 1: Wyckoff bond: `2a@2a`

No.	vector	center	mapping
1	$[0,\ Y,\ Z]$	$[x,\ 0,\ 0]$	`[1,-4]`
2	$[0,\ -Y,\ Z]$	$\left[-x,\ 0,\ \frac{1}{2}\right]$	`[2,-3]`

Table 2: Wyckoff bond: `2b@2a`

No.	vector	center	mapping
1	$[X,\ 0,\ 0]$	$[x,\ 0,\ 0]$	`[1,4]`
2	$[-X,\ 0,\ 0]$	$\left[-x,\ 0,\ \frac{1}{2}\right]$	`[2,3]`

Table 3: Wyckoff bond: `4c@2a`

No.	vector	center	mapping
1	$[X,\ Y,\ Z]$	$[x,\ 0,\ 0]$	`[1]`
2	$[-X,\ -Y,\ Z]$	$\left[-x,\ 0,\ \frac{1}{2}\right]$	`[2]`
3	$[-X,\ Y,\ -Z]$	$\left[-x,\ 0,\ \frac{1}{2}\right]$	`[3]`
4	$[X,\ -Y,\ -Z]$	$[x,\ 0,\ 0]$	`[4]`

* Wyckoff site: `2b`, site symmetry: `2..`

Table 4: Wyckoff bond: `2a@2b`

No.	vector	center	mapping
1	$[0,\ Y,\ Z]$	$\left[x,\ \frac{1}{2},\ 0\right]$	`[1,-4]`
2	$[0,\ -Y,\ Z]$	$\left[-x,\ \frac{1}{2},\ \frac{1}{2}\right]$	`[2,-3]`

Table 5: Wyckoff bond: `2b@2b`

No.	vector	center	mapping
1	$[X,\ 0,\ 0]$	$\left[x,\ \frac{1}{2},\ 0\right]$	`[1,4]`
2	$[-X,\ 0,\ 0]$	$\left[-x,\ \frac{1}{2},\ \frac{1}{2}\right]$	`[2,3]`

Table 6: Wyckoff bond: `4c@2b`

No.	vector	center	mapping
1	$[X, Y, Z]$	$\left[x, \frac{1}{2}, 0\right]$	`[1]`
2	$[-X, -Y, Z]$	$\left[-x, \frac{1}{2}, \frac{1}{2}\right]$	`[2]`
3	$[-X, Y, -Z]$	$\left[-x, \frac{1}{2}, \frac{1}{2}\right]$	`[3]`
4	$[X, -Y, -Z]$	$\left[x, \frac{1}{2}, 0\right]$	`[4]`

* Wyckoff site: `2c`, site symmetry: `.2.`

Table 7: Wyckoff bond: `2a@2c`

No.	vector	center	mapping
1	$[X, 0, Z]$	$\left[0, y, \frac{1}{4}\right]$	`[1,-3]`
2	$[-X, 0, Z]$	$\left[0, -y, \frac{3}{4}\right]$	`[2,-4]`

Table 8: Wyckoff bond: `2b@2c`

No.	vector	center	mapping
1	$[0, Y, 0]$	$\left[0, y, \frac{1}{4}\right]$	`[1,3]`
2	$[0, -Y, 0]$	$\left[0, -y, \frac{3}{4}\right]$	`[2,4]`

Table 9: Wyckoff bond: `4c@2c`

No.	vector	center	mapping
1	$[X, Y, Z]$	$\left[0, y, \frac{1}{4}\right]$	`[1]`
2	$[-X, -Y, Z]$	$\left[0, -y, \frac{3}{4}\right]$	`[2]`
3	$[-X, Y, -Z]$	$\left[0, y, \frac{1}{4}\right]$	`[3]`
4	$[X, -Y, -Z]$	$\left[0, -y, \frac{3}{4}\right]$	`[4]`

* Wyckoff site: `2d`, site symmetry: `.2.`

Table 10: Wyckoff bond: `2a@2d`

No.	vector	center	mapping
1	$[X, 0, Z]$	$\left[\frac{1}{2}, y, \frac{1}{4}\right]$	`[1,-3]`
2	$[-X, 0, Z]$	$\left[\frac{1}{2}, -y, \frac{3}{4}\right]$	`[2,-4]`

Table 11: Wyckoff bond: `2b@2d`

No.	vector	center	mapping
1	$[0,\, Y,\, 0]$	$\left[\frac{1}{2},\, y,\, \frac{1}{4}\right]$	`[1,3]`
2	$[0,\, -Y,\, 0]$	$\left[\frac{1}{2},\, -y,\, \frac{3}{4}\right]$	`[2,4]`

Table 12: Wyckoff bond: `4c@2d`

No.	vector	center	mapping
1	$[X,\, Y,\, Z]$	$\left[\frac{1}{2},\, y,\, \frac{1}{4}\right]$	`[1]`
2	$[-X,\, -Y,\, Z]$	$\left[\frac{1}{2},\, -y,\, \frac{3}{4}\right]$	`[2]`
3	$[-X,\, Y,\, -Z]$	$\left[\frac{1}{2},\, y,\, \frac{1}{4}\right]$	`[3]`
4	$[X,\, -Y,\, -Z]$	$\left[\frac{1}{2},\, -y,\, \frac{3}{4}\right]$	`[4]`

* Wyckoff site: `4e`, site symmetry: `1`

Table 13: Wyckoff bond: `4a@4e`

No.	vector	center	mapping
1	$[X,\, Y,\, Z]$	$[x,\, y,\, z]$	`[1]`
2	$[-X,\, -Y,\, Z]$	$\left[-x,\, -y,\, z+\frac{1}{2}\right]$	`[2]`
3	$[-X,\, Y,\, -Z]$	$\left[-x,\, y,\, \frac{1}{2}-z\right]$	`[3]`
4	$[X,\, -Y,\, -Z]$	$[x,\, -y,\, -z]$	`[4]`