SG No. 172 C_6^5 $P6_4$ [hexagonal]

* plus set: $+[0,\ 0,\ 0]$
* Wyckoff site: `3a`, site symmetry: `2..`

Table 1: Wyckoff bond: `3a@3a`

No.	vector	center	mapping
1	$[X,\ Y,\ 0]$	$[0,\ 0,\ z]$	`[1,-4]`
2	$[-Y,\ X-Y,\ 0]$	$\left[0,\ 0,\ z+\frac{1}{3}\right]$	`[2,-5]`
3	$[-X+Y,\ -X,\ 0]$	$\left[0,\ 0,\ z+\frac{2}{3}\right]$	`[3,-6]`

Table 2: Wyckoff bond: `3b@3a`

No.	vector	center	mapping
1	$[0,\ 0,\ Z]$	$[0,\ 0,\ z]$	`[1,4]`
2	$[0,\ 0,\ Z]$	$\left[0,\ 0,\ z+\frac{1}{3}\right]$	`[2,5]`
3	$[0,\ 0,\ Z]$	$\left[0,\ 0,\ z+\frac{2}{3}\right]$	`[3,6]`

Table 3: Wyckoff bond: `6c@3a`

No.	vector	center	mapping
1	$[X,\ Y,\ Z]$	$[0,\ 0,\ z]$	`[1]`
2	$[-Y,\ X-Y,\ Z]$	$\left[0,\ 0,\ z+\frac{1}{3}\right]$	`[2]`
3	$[-X+Y,\ -X,\ Z]$	$\left[0,\ 0,\ z+\frac{2}{3}\right]$	`[3]`
4	$[-X,\ -Y,\ Z]$	$[0,\ 0,\ z]$	`[4]`
5	$[Y,\ -X+Y,\ Z]$	$\left[0,\ 0,\ z+\frac{1}{3}\right]$	`[5]`
6	$[X-Y,\ X,\ Z]$	$\left[0,\ 0,\ z+\frac{2}{3}\right]$	`[6]`

* Wyckoff site: `3b`, site symmetry: `2..`

Table 4: Wyckoff bond: `3a@3b`

No.	vector	center	mapping
1	$[X,\ Y,\ 0]$	$\left[\frac{1}{2},\ \frac{1}{2},\ z\right]$	`[1,-4]`
2	$[-Y,\ X-Y,\ 0]$	$\left[\frac{1}{2},\ 0,\ z+\frac{1}{3}\right]$	`[2,-5]`
3	$[-X+Y,\ -X,\ 0]$	$\left[0,\ \frac{1}{2},\ z+\frac{2}{3}\right]$	`[3,-6]`

Table 5: Wyckoff bond: `3b@3b`

No.	vector	center	mapping
1	$[0,\ 0,\ Z]$	$\left[\frac{1}{2},\ \frac{1}{2},\ z\right]$	`[1,4]`
2	$[0,\ 0,\ Z]$	$\left[\frac{1}{2},\ 0,\ z+\frac{1}{3}\right]$	`[2,5]`
3	$[0,\ 0,\ Z]$	$\left[0,\ \frac{1}{2},\ z+\frac{2}{3}\right]$	`[3,6]`

Table 6: Wyckoff bond: `6c@3b`

No.	vector	center	mapping
1	$[X,\ Y,\ Z]$	$\left[\frac{1}{2},\ \frac{1}{2},\ z\right]$	`[1]`
2	$[-Y,\ X-Y,\ Z]$	$\left[\frac{1}{2},\ 0,\ z+\frac{1}{3}\right]$	`[2]`
3	$[-X+Y,\ -X,\ Z]$	$\left[0,\ \frac{1}{2},\ z+\frac{2}{3}\right]$	`[3]`
4	$[-X,\ -Y,\ Z]$	$\left[\frac{1}{2},\ \frac{1}{2},\ z\right]$	`[4]`
5	$[Y,\ -X+Y,\ Z]$	$\left[\frac{1}{2},\ 0,\ z+\frac{1}{3}\right]$	`[5]`
6	$[X-Y,\ X,\ Z]$	$\left[0,\ \frac{1}{2},\ z+\frac{2}{3}\right]$	`[6]`

* Wyckoff site: `6c`, site symmetry: `1`

Table 7: Wyckoff bond: `6a@6c`

No.	vector	center	mapping
1	$[X,\ Y,\ Z]$	$[x,\ y,\ z]$	`[1]`
2	$[-Y,\ X-Y,\ Z]$	$\left[-y,\ x-y,\ z+\frac{1}{3}\right]$	`[2]`
3	$[-X+Y,\ -X,\ Z]$	$\left[-x+y,\ -x,\ z+\frac{2}{3}\right]$	`[3]`
4	$[-X,\ -Y,\ Z]$	$[-x,\ -y,\ z]$	`[4]`
5	$[Y,\ -X+Y,\ Z]$	$\left[y,\ -x+y,\ z+\frac{1}{3}\right]$	`[5]`
6	$[X-Y,\ X,\ Z]$	$\left[x-y,\ x,\ z+\frac{2}{3}\right]$	`[6]`