

SG No. 171 C_6^4 $P6_2$ [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]	[0, 0, z + $\frac{2}{3}$]	[2, -5]
3	[-X + Y, -X, 0]	[0, 0, z + $\frac{1}{3}$]	[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]	[0, 0, z + $\frac{2}{3}$]	[2, 5]
3	[0, 0, Z]	[0, 0, z + $\frac{1}{3}$]	[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]	[0, 0, z + $\frac{2}{3}$]	[2]
3	[-X + Y, -X, Z]	[0, 0, z + $\frac{1}{3}$]	[3]
4	[-X, -Y, Z]	[0, 0, z]	[4]
5	[Y, -X + Y, Z]	[0, 0, z + $\frac{2}{3}$]	[5]
6	[X - Y, X, Z]	[0, 0, z + $\frac{1}{3}$]	[6]

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

Table 4: Wyckoff bond: 3a@3b

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

Table 5: Wyckoff bond: 3b@3b

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

Table 6: Wyckoff bond: 6c@3b

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