

SG No. 173 C_6^6 $P6_3$ [hexagonal]

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

* Wyckoff site: **2a**, site symmetry: $\bar{3}$. .

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

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

Table 2: Wyckoff bond: **6b@2a**

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

* Wyckoff site: **2b**, site symmetry: $\bar{3}$. .

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

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

Table 4: Wyckoff bond: **6b@2b**

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

* Wyckoff site: **6c**, site symmetry: $\bar{1}$

Table 5: Wyckoff bond: **6a@6c**

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