SG No. 24 D_2^9 $I2_12_12_1$ [orthorhombic]

* plus set: $+[0,\ 0,\ 0]$, $+\left[\frac{1}{2},\ \frac{1}{2},\ \frac{1}{2}\right]$
* Wyckoff site: `4a`, site symmetry: `2..`

Table 1: Wyckoff bond: `4a@4a`

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

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

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

Table 3: Wyckoff bond: `8c@4a`

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

* Wyckoff site: `4b`, site symmetry: `.2.`

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

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

Table 5: Wyckoff bond: `4b@4b`

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

Table 6: Wyckoff bond: `8c@4b`

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

* Wyckoff site: `4c`, site symmetry: `..2`

Table 7: Wyckoff bond: `4a@4c`

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

Table 8: Wyckoff bond: `4b@4c`

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

Table 9: Wyckoff bond: `8c@4c`

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

* Wyckoff site: `8d`, site symmetry: `1`

Table 10: Wyckoff bond: `8a@8d`

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