

SG No. 198 T^4 $P2_13$ [cubic]

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

* Wyckoff site: 4a, site symmetry: .3.

Table 1: Wyckoff bond: 4a@4a

| No. | vector | center | mapping |
|-----|-------------|--|----------|
| 1 | [X, X, X] | [x, x, x] | [1,5,9] |
| 2 | [-X, -X, X] | [\frac{1}{2} - x, -x, x + \frac{1}{2}] | [2,7,12] |
| 3 | [-X, X, -X] | [-x, x + \frac{1}{2}, \frac{1}{2} - x] | [3,8,10] |
| 4 | [X, -X, -X] | [x + \frac{1}{2}, \frac{1}{2} - x, -x] | [4,6,11] |

Table 2: Wyckoff bond: 12b@4a

| No. | vector | center | mapping |
|-----|-------------|--|---------|
| 1 | [X, Y, Z] | [x, x, x] | [1] |
| 2 | [-X, -Y, Z] | [\frac{1}{2} - x, -x, x + \frac{1}{2}] | [2] |
| 3 | [-X, Y, -Z] | [-x, x + \frac{1}{2}, \frac{1}{2} - x] | [3] |
| 4 | [X, -Y, -Z] | [x + \frac{1}{2}, \frac{1}{2} - x, -x] | [4] |
| 5 | [Z, X, Y] | [x, x, x] | [5] |
| 6 | [Z, -X, -Y] | [x + \frac{1}{2}, \frac{1}{2} - x, -x] | [6] |
| 7 | [-Z, -X, Y] | [\frac{1}{2} - x, -x, x + \frac{1}{2}] | [7] |
| 8 | [-Z, X, -Y] | [-x, x + \frac{1}{2}, \frac{1}{2} - x] | [8] |
| 9 | [Y, Z, X] | [x, x, x] | [9] |
| 10 | [-Y, Z, -X] | [-x, x + \frac{1}{2}, \frac{1}{2} - x] | [10] |
| 11 | [Y, -Z, -X] | [x + \frac{1}{2}, \frac{1}{2} - x, -x] | [11] |
| 12 | [-Y, -Z, X] | [\frac{1}{2} - x, -x, x + \frac{1}{2}] | [12] |

* Wyckoff site: 12b, site symmetry: 1

Table 3: Wyckoff bond: 12a@12b

| No. | vector | center | mapping |
|-----|-------------|--|---------|
| 1 | [X, Y, Z] | [x, y, z] | [1] |
| 2 | [-X, -Y, Z] | [\frac{1}{2} - x, -y, z + \frac{1}{2}] | [2] |
| 3 | [-X, Y, -Z] | [-x, y + \frac{1}{2}, \frac{1}{2} - z] | [3] |
| 4 | [X, -Y, -Z] | [x + \frac{1}{2}, \frac{1}{2} - y, -z] | [4] |
| 5 | [Z, X, Y] | [z, x, y] | [5] |
| 6 | [Z, -X, -Y] | [z + \frac{1}{2}, \frac{1}{2} - x, -y] | [6] |
| 7 | [-Z, -X, Y] | [\frac{1}{2} - z, -x, y + \frac{1}{2}] | [7] |
| 8 | [-Z, X, -Y] | [-z, x + \frac{1}{2}, \frac{1}{2} - y] | [8] |
| 9 | [Y, Z, X] | [y, z, x] | [9] |
| 10 | [-Y, Z, -X] | [-y, z + \frac{1}{2}, \frac{1}{2} - x] | [10] |
| 11 | [Y, -Z, -X] | [y + \frac{1}{2}, \frac{1}{2} - z, -x] | [11] |
| 12 | [-Y, -Z, X] | [\frac{1}{2} - y, -z, x + \frac{1}{2}] | [12] |

