

$\mu 6_3/m$

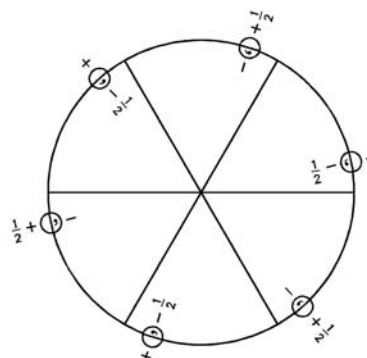
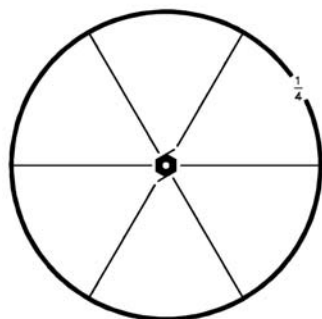
$6/m$

Hexagonal

No. 61

$\mu 6_3/m$

Patterson symmetry $\mu 6/m$



Origin at centre ($\bar{3}$) on 6_3

Asymmetric unit $0 \leq x; 0 \leq y; 0 \leq z \leq \frac{1}{4}$

Symmetry operations

- | | | |
|------------------------------|---------------------------------------------|---------------------------------------------|
| (1) 1 | (2) $3^+ 0, 0, z$ | (3) $3^- 0, 0, z$ |
| (4) $2(\frac{1}{2}) 0, 0, z$ | (5) $6^-(\frac{1}{2}) 0, 0, z$ | (6) $6^+(\frac{1}{2}) 0, 0, z$ |
| (7) $\bar{1} 0, 0, 0$ | (8) $\bar{3}^+ 0, 0, z; 0, 0, 0$ | (9) $\bar{3}^- 0, 0, z; 0, 0, 0$ |
| (10) $m x, y, \frac{1}{4}$ | (11) $\bar{6}^- 0, 0, z; 0, 0, \frac{1}{4}$ | (12) $\bar{6}^+ 0, 0, z; 0, 0, \frac{1}{4}$ |

Generators selected (1); $t(0,0,1)$; (2); (4); (7)

Positions

Multiplicity, Wyckoff letter, Site symmetry	Coordinates								Reflection conditions	
									General:	
12 <i>e</i> 1	(1) x, y, z	(2) $\bar{y}, x - y, z$	(3) $\bar{x} + y, \bar{x}, z$	(4) $\bar{x}, \bar{y}, z + \frac{1}{2}$	(5) $y, \bar{x} + y, z + \frac{1}{2}$	(6) $x - y, x, z + \frac{1}{2}$	(7) $\bar{x}, \bar{y}, \bar{z}$	(8) $y, \bar{x} + y, \bar{z}$	(9) $x - y, x, \bar{z}$	$l : l = 2n$
	(10) $x, y, \bar{z} + \frac{1}{2}$	(11) $\bar{y}, x - y, \bar{z} + \frac{1}{2}$	(12) $\bar{x} + y, \bar{x}, \bar{z} + \frac{1}{2}$	Special: no extra conditions						
6 <i>d</i> $m..$	$x, y, \frac{1}{4}$	$\bar{y}, x - y, \frac{1}{4}$	$\bar{x} + y, \bar{x}, \frac{1}{4}$	$\bar{x}, \bar{y}, \frac{3}{4}$	$y, \bar{x} + y, \frac{3}{4}$	$x - y, x, \frac{3}{4}$				
4 <i>c</i> $3..$	$0, 0, z$	$0, 0, z + \frac{1}{2}$	$0, 0, \bar{z}$	$0, 0, \bar{z} + \frac{1}{2}$						
2 <i>b</i> $\bar{3}..$	$0, 0, 0$	$0, 0, \frac{1}{2}$								
2 <i>a</i> $\bar{6}..$	$0, 0, \frac{1}{4}$	$0, 0, \frac{3}{4}$								

Symmetry of special projections

Along [001] 6

Along [100] $\bar{6}2mg$

Along [210] $\bar{6}2mg$

$\mathbf{a}' = \mathbf{c}$

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Origin at $0, 0, z$

Origin at $x, 0, 0$

Origin at $x, \frac{1}{2}x, 0$

Maximal non-isotypic non-enantiomorphic subgroups

I	$[2]\bar{6}$ (59)	1; 2; 3; 10; 11; 12
	$[2]\bar{6}_3$ (56)	1; 2; 3; 4; 5; 6
	$[2]\bar{3}$ (45)	1; 2; 3; 7; 8; 9
	$[3]\bar{1}12_1/m$ (12)	1; 4; 7; 10

IIa none

IIb none

Maximal isotypic subgroups and enantiomorphic subgroups of lowest index

IIc $[3]\bar{6}_3/m$ ($\mathbf{c}' = 3\mathbf{c}$) (61)

Minimal non-isotypic non-enantiomorphic supergroups

I $[2]\bar{6}_3/mmc$ (75)

II $[2]\bar{6}/m$ ($\mathbf{c}' = \frac{1}{2}\mathbf{c}$) (60)