

$p6mm$

No. 17

$p6mm$

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

General position

Multiplicity,
Wyckoff letter,
Site symmetry

Coordinates

12	f	1	(1) x, y	(2) $\bar{y}, x-y$	(3) $\bar{x}+y, \bar{x}$
			(4) \bar{x}, \bar{y}	(5) $y, \bar{x}+y$	(6) $x-y, x$
			(7) \bar{y}, \bar{x}	(8) $\bar{x}+y, y$	(9) $x, x-y$
			(10) y, x	(11) $x-y, \bar{y}$	(12) $\bar{x}, \bar{x}+y$

I Maximal *translationengleiche* subgroups

[2] $p611$ (16, $p6$)	1; 2; 3; 4; 5; 6	
[2] $p31m$ (15)	1; 2; 3; 10; 11; 12	
[2] $p3m1$ (14)	1; 2; 3; 7; 8; 9	
{ [3] $p2mm$ (9, $c2mm$)	1; 4; 7; 10	$\mathbf{a-b, a+b}$
{ [3] $p2mm$ (9, $c2mm$)	1; 4; 8; 11	$\mathbf{a+2b, -a}$
{ [3] $p2mm$ (9, $c2mm$)	1; 4; 9; 12	$\mathbf{2a+b, b}$

II Maximal *klassengleiche* subgroups

• Enlarged unit cell

[3] $\mathbf{a}' = 3\mathbf{a}, \mathbf{b}' = 3\mathbf{b}$			
{ $h6mm$ (17, $p6mm$)	$\langle 2; 4; 7 \rangle$	$\mathbf{a-b, a+2b}$	
{ $h6mm$ (17, $p6mm$)	$\langle 2+(1, -1); 4+(2, 0); 7+(1, 1) \rangle$	$\mathbf{a-b, a+2b}$	1, 0
{ $h6mm$ (17, $p6mm$)	$\langle 2+(2, -2); 4+(4, 0); 7+(2, 2) \rangle$	$\mathbf{a-b, a+2b}$	2, 0
[4] $\mathbf{a}' = 2\mathbf{a}, \mathbf{b}' = 2\mathbf{b}$			
{ $p6mm$ (17)	$\langle 2; 4; 7 \rangle$	$\mathbf{2a, 2b}$	
{ $p6mm$ (17)	$\langle 2+(1, -1); 4+(2, 0); 7+(1, 1) \rangle$	$\mathbf{2a, 2b}$	1, 0
{ $p6mm$ (17)	$\langle 2+(1, 2); 4+(0, 2); 7+(1, 1) \rangle$	$\mathbf{2a, 2b}$	0, 1
{ $p6mm$ (17)	$\langle 2+(2, 1); (4; 7)+(2, 2) \rangle$	$\mathbf{2a, 2b}$	1, 1

• Series of maximal isomorphic subgroups

[p^2] $\mathbf{a}' = p\mathbf{a}, \mathbf{b}' = p\mathbf{b}$			
$p6mm$ (17)	$\langle 2+(u+v, -u+2v); 4+(2u, 2v); 7+(u+v, u+v) \rangle$	$\mathbf{pa, pb}$	u, v
	p prime; $p \neq 3$; $0 \leq u < p$; $0 \leq v < p$		
	p^2 conjugate subgroups		

I Minimal *translationengleiche* supergroups

none

II Minimal non-isomorphic *klassengleiche* supergroups

none