

$p2mm$ 

No. 6

 $p2mm$ 
**Generators selected** (1);  $t(1,0)$ ;  $t(0,1)$ ; (2); (3)

**General position**

 Multiplicity,  
 Wyckoff letter,  
 Site symmetry

Coordinates

 4 *i* 1

 (1)  $x,y$  (2)  $\bar{x},\bar{y}$  (3)  $\bar{x},y$  (4)  $x,\bar{y}$ 
**I Maximal translationengleiche subgroups**

[2] $p1m1$ (3, $pm$ )	1; 3	
[2] $p11m$ (3, $pm$ )	1; 4	<b>b, -a</b>
[2] $p211$ (2, $p2$ )	1; 2	

**II Maximal klassengleiche subgroups**

## • Enlarged unit cell

[2] $\mathbf{a}' = 2\mathbf{a}$			
$p2mg$ (7)	$\langle 2; 3 + (1,0) \rangle$	<b>2a, b</b>	
$p2mg$ (7)	$\langle 3; 2 + (1,0) \rangle$	<b>2a, b</b>	1/2, 0
$p2mm$ (6)	$\langle 2; 3 \rangle$	<b>2a, b</b>	
$p2mm$ (6)	$\langle (2; 3) + (1,0) \rangle$	<b>2a, b</b>	1/2, 0
[2] $\mathbf{b}' = 2\mathbf{b}$			
$p2gm$ (7, $p2mg$ )	$\langle 2; 3 + (0,1) \rangle$	<b>2b, -a</b>	
$p2gm$ (7, $p2mg$ )	$\langle (2; 3) + (0,1) \rangle$	<b>2b, -a</b>	0, 1/2
$p2mm$ (6)	$\langle 2; 3 \rangle$	<b>a, 2b</b>	
$p2mm$ (6)	$\langle 3; 2 + (0,1) \rangle$	<b>a, 2b</b>	0, 1/2
[2] $\mathbf{a}' = 2\mathbf{a}, \mathbf{b}' = 2\mathbf{b}$			
$c2mm$ (9)	$\langle 2; 3 \rangle$	<b>2a, 2b</b>	
$c2mm$ (9)	$\langle 3; 2 + (0,1) \rangle$	<b>2a, 2b</b>	0, 1/2
$c2mm$ (9)	$\langle (2; 3) + (1,0) \rangle$	<b>2a, 2b</b>	1/2, 0
$c2mm$ (9)	$\langle 2 + (1,1); 3 + (1,0) \rangle$	<b>2a, 2b</b>	1/2, 1/2
[3] $\mathbf{a}' = 3\mathbf{a}$			
$p2mm$ (6)	$\langle 2; 3 \rangle$	<b>3a, b</b>	
$p2mm$ (6)	$\langle (2; 3) + (2,0) \rangle$	<b>3a, b</b>	1, 0
$p2mm$ (6)	$\langle (2; 3) + (4,0) \rangle$	<b>3a, b</b>	2, 0
[3] $\mathbf{b}' = 3\mathbf{b}$			
$p2mm$ (6)	$\langle 2; 3 \rangle$	<b>a, 3b</b>	
$p2mm$ (6)	$\langle 3; 2 + (0,2) \rangle$	<b>a, 3b</b>	0, 1
$p2mm$ (6)	$\langle 3; 2 + (0,4) \rangle$	<b>a, 3b</b>	0, 2
• Series of maximal isomorphic subgroups			
[ $p$ ] $\mathbf{a}' = p\mathbf{a}$			
$p2mm$ (6)	$\langle (2; 3) + (2u, 0) \rangle$ prime $p > 2$ ; $0 \leq u < p$ $p$ conjugate subgroups	<b>pa, b</b>	$u, 0$
[ $p$ ] $\mathbf{b}' = p\mathbf{b}$			
$p2mm$ (6)	$\langle 3; 2 + (0, 2u) \rangle$ prime $p > 2$ ; $0 \leq u < p$ $p$ conjugate subgroups	<b>a, pb</b>	$0, u$

**I Minimal translationengleiche supergroups**

 [2]  $p4mm$  (11)

**II Minimal non-isomorphic klassengleiche supergroups**

## • Additional centring translations

 [2]  $c2mm$  (9)

## • Decreased unit cell

none