

$p2mm$ 

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	$\mathbf{b}, -\mathbf{a}$
[2] $p211$ (2, $p2$ )	1; 2	

II Maximal *klassengleiche* subgroups

## • Enlarged unit cell

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

I Minimal *translationengleiche* supergroups[2]  $p4mm$  (11)II Minimal non-isomorphic *klassengleiche* supergroups

## • Additional centring translations

[2]  $c2mm$  (9)

## • Decreased unit cell

none