

$p2mg$

No. 7

 $p2mg$

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

General position

 Multiplicity,
 Wyckoff letter,
 Site symmetry

Coordinates

 4 d 1

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

[2] $p11g$ (4, pg)	1; 4	$-\mathbf{b}, \mathbf{a}$	
[2] $p1m1$ (3, pm)	1; 3		$1/4, 0$
[2] $p211$ (2, $p2$)	1; 2		

II Maximal klassengleiche subgroups

• Enlarged unit cell

[2] $\mathbf{b}' = 2\mathbf{b}$			
$p2gg$ (8)	$\langle 2; 3 + (0, 1) \rangle$	$\mathbf{a}, 2\mathbf{b}$	
$p2gg$ (8)	$\langle (2; 3) + (0, 1) \rangle$	$\mathbf{a}, 2\mathbf{b}$	$0, 1/2$
$p2mg$ (7)	$\langle 2; 3 \rangle$	$\mathbf{a}, 2\mathbf{b}$	
$p2mg$ (7)	$\langle 3; 2 + (0, 1) \rangle$	$\mathbf{a}, 2\mathbf{b}$	$0, 1/2$
[3] $\mathbf{a}' = 3\mathbf{a}$			
$p2mg$ (7)	$\langle 2; 3 + (1, 0) \rangle$	$3\mathbf{a}, \mathbf{b}$	
$p2mg$ (7)	$\langle 2 + (2, 0); 3 + (3, 0) \rangle$	$3\mathbf{a}, \mathbf{b}$	$1, 0$
$p2mg$ (7)	$\langle 2 + (4, 0); 3 + (5, 0) \rangle$	$3\mathbf{a}, \mathbf{b}$	$2, 0$
[3] $\mathbf{b}' = 3\mathbf{b}$			
$p2mg$ (7)	$\langle 2; 3 \rangle$	$\mathbf{a}, 3\mathbf{b}$	
$p2mg$ (7)	$\langle 3; 2 + (0, 2) \rangle$	$\mathbf{a}, 3\mathbf{b}$	$0, 1$
$p2mg$ (7)	$\langle 3; 2 + (0, 4) \rangle$	$\mathbf{a}, 3\mathbf{b}$	$0, 2$

• Series of maximal isomorphic subgroups

[p] $\mathbf{a}' = p\mathbf{a}$			
$p2mg$ (7)	$\langle 2 + (2u, 0); 3 + (\frac{p}{2} - \frac{1}{2} + 2u, 0) \rangle$	$p\mathbf{a}, \mathbf{b}$	$u, 0$
	$p > 2; 0 \leq u < p$		
	p conjugate subgroups for the prime p		
[p] $\mathbf{b}' = p\mathbf{b}$			
$p2mg$ (7)	$\langle 3; 2 + (0, 2u) \rangle$	$\mathbf{a}, p\mathbf{b}$	$0, u$
	$p > 2; 0 \leq u < p$		
	p conjugate subgroups for the prime p		

I Minimal translationengleiche supergroups none

II Minimal non-isomorphic klassengleiche supergroups

• Additional centring translations

 [2] $c2mm$ (9)

• Decreased unit cell

 [2] $\mathbf{a}' = \frac{1}{2}\mathbf{a}$ $p2mm$ (6)