D_{2h}^{9} $P2_1/b2_1/a2/m$ No. 55 $Pbam$

Generators selected (1); $t(1,0,0)$; $t(0,1,0)$; $t(0,0,1)$; (2); (3); (5)

General position

Multiplicity, Wyckoff letter, Site symmetry		Coordinates			
8	*i*	1	(1) x,y,z	(2) $\bar{x},\bar{y},z$	(3) $\bar{x}+\frac{1}{2},y+\frac{1}{2},\bar{z}$	(4) $x+\frac{1}{2},\bar{y}+\frac{1}{2},\bar{z}$
			(5) $\bar{x},\bar{y},\bar{z}$	(6) $x,y,\bar{z}$	(7) $x+\frac{1}{2},\bar{y}+\frac{1}{2},z$	(8) $\bar{x}+\frac{1}{2},y+\frac{1}{2},z$

I Maximal *translationengleiche* subgroups

[2] *Pba*2 (32)	1; 2; 7; 8		
[2] *Pb*2$_1$*m* (26, *Pmc*2$_1$)	1; 3; 6; 8	**c**, **a**, **b**	1/4, 0, 0
[2] *P*2$_1$*am* (26, *Pmc*2$_1$)	1; 4; 6; 7	**c**, **b**, −**a**	0, 1/4, 0
[2] *P*2$_1$2$_1$2 (18)	1; 2; 3; 4		
[2] *P*12$_1$/*a*1 (14, *P*12$_1$/*c*1)	1; 3; 5; 7	−**a** − **c**, **b**, **a**	
[2] *P*2$_1$/*b*11 (14, *P*12$_1$/*c*1)	1; 4; 5; 8	**c**, **a**, **b**	
[2] *P*112/*m* (10)	1; 2; 5; 6		

II Maximal *klassengleiche* subgroups

- **Enlarged unit cell**

[2] $\mathbf{c}' = 2\mathbf{c}$			
Pnam (62, *Pnma*)	$\langle 3;\ 5;\ 2+(0,0,1)\rangle$	**a**, −2**c**, **b**	
Pnam (62, *Pnma*)	$\langle (2;\ 3;\ 5)+(0,0,1)\rangle$	**a**, −2**c**, **b**	0, 0, 1/2
Pbnm (62, *Pnma*)	$\langle 5;\ (2;\ 3)+(0,0,1)\rangle$	**b**, 2**c**, **a**	
Pbnm (62, *Pnma*)	$\langle 3;\ (2;\ 5)+(0,0,1)\rangle$	**b**, 2**c**, **a**	0, 0, 1/2
Pnnm (58)	$\langle 2;\ 5;\ 3+(0,0,1)\rangle$	**a**, **b**, 2**c**	
Pnnm (58)	$\langle 2;\ 3;\ 5+(0,0,1)\rangle$	**a**, **b**, 2**c**	0, 0, 1/2
Pbam (55)	$\langle 2;\ 3;\ 5\rangle$	**a**, **b**, 2**c**	
Pbam (55)	$\langle 2;\ (3;\ 5)+(0,0,1)\rangle$	**a**, **b**, 2**c**	0, 0, 1/2
[3] $\mathbf{a}' = 3\mathbf{a}$			
Pbam (55)	$\langle 2;\ 5;\ 3+(1,0,0)\rangle$	3**a**, **b**, **c**	
Pbam (55)	$\langle (2;\ 5)+(2,0,0);\ 3+(3,0,0)\rangle$	3**a**, **b**, **c**	1, 0, 0
Pbam (55)	$\langle (2;\ 5)+(4,0,0);\ 3+(5,0,0)\rangle$	3**a**, **b**, **c**	2, 0, 0
[3] $\mathbf{b}' = 3\mathbf{b}$			
Pbam (55)	$\langle 2;\ 5;\ 3+(0,1,0)\rangle$	**a**, 3**b**, **c**	
Pbam (55)	$\langle (2;\ 5)+(0,2,0);\ 3+(0,1,0)\rangle$	**a**, 3**b**, **c**	0, 1, 0
Pbam (55)	$\langle (2;\ 5)+(0,4,0);\ 3+(0,1,0)\rangle$	**a**, 3**b**, **c**	0, 2, 0
[3] $\mathbf{c}' = 3\mathbf{c}$			
Pbam (55)	$\langle 2;\ 3;\ 5\rangle$	**a**, **b**, 3**c**	
Pbam (55)	$\langle 2;\ (3;\ 5)+(0,0,2)\rangle$	**a**, **b**, 3**c**	0, 0, 1
Pbam (55)	$\langle 2;\ (3;\ 5)+(0,0,4)\rangle$	**a**, **b**, 3**c**	0, 0, 2

- **Series of maximal isomorphic subgroups**

[p] $\mathbf{a}' = p\mathbf{a}$			
Pbam (55)	$\langle (2;\ 5)+(2u,0,0);\ 3+(\frac{p}{2}-\frac{1}{2}+2u,0,0)\rangle$ prime $p>2$; $0\le u<p$ p conjugate subgroups	p**a**, **b**, **c**	u, 0, 0
[p] $\mathbf{b}' = p\mathbf{b}$			
Pbam (55)	$\langle (2;\ 5)+(0,2u,0);\ 3+(0,\frac{p}{2}-\frac{1}{2},0)\rangle$ prime $p>2$; $0\le u<p$ p conjugate subgroups	**a**, p**b**, **c**	0, u, 0
[p] $\mathbf{c}' = p\mathbf{c}$			
Pbam (55)	$\langle 2;\ (3;\ 5)+(0,0,2u)\rangle$ prime $p>2$; $0\le u<p$ p conjugate subgroups	**a**, **b**, p**c**	0, 0, u

I Minimal *translationengleiche* supergroups

[2] *P*4/*mbm* (127); [2] *P*4$_2$/*mbc* (135)

II Minimal non-isomorphic *klassengleiche* supergroups

- **Additional centring translations**

[2] *Aeam* (64, *Cmce*); [2] *Bbem* (64, *Cmce*); [2] *Cmmm* (65); [2] *Ibam* (72)

- **Decreased unit cell**

[2] $\mathbf{a}' = \frac{1}{2}\mathbf{a}$ *Pbmm* (51, *Pmma*); [2] $\mathbf{b}' = \frac{1}{2}\mathbf{b}$ *Pmam* (51, *Pmma*)

