

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>i</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] $Pba2$ (32)	1; 2; 7; 8		
[2] $Pb2_1m$ (26, $Pmc2_1$)	1; 3; 6; 8	c, a, b	1/4, 0, 0
[2] $P2_1am$ (26, $Pmc2_1$)	1; 4; 6; 7	c, b, -a	0, 1/4, 0
[2] $P2_12_12$ (18)	1; 2; 3; 4		
[2] $P12_1/a1$ (14, $P12_1/c1$)	1; 3; 5; 7	-a - c, b, a	
[2] $P2_1/b11$ (14, $P12_1/c1$)	1; 4; 5; 8	c, a, b	
[2] $P112/m$ (10)	1; 2; 5; 6		

II Maximal klassengleiche subgroups

• Enlarged unit cell

[2] $c' = 2c$			
$Pnam$ (62, $Pnma$) $Pnam$ (62, $Pnma$) $Pbnm$ (62, $Pnma$) $Pbnm$ (62, $Pnma$) $Pnmm$ (58) $Pnmm$ (58) $Pbam$ (55) $Pbam$ (55)	$\langle 3; 5; 2 + (0, 0, 1) \rangle$ $\langle (2; 3; 5) + (0, 0, 1) \rangle$ $\langle 5; (2; 3) + (0, 0, 1) \rangle$ $\langle 3; (2; 5) + (0, 0, 1) \rangle$ $\langle 2; 5; 3 + (0, 0, 1) \rangle$ $\langle 2; 3; 5 + (0, 0, 1) \rangle$ $\langle 2; 3; 5 \rangle$ $\langle 2; (3; 5) + (0, 0, 1) \rangle$	a, -2c, b a, -2c, b b, 2c, a b, 2c, a a, b, 2c a, b, 2c a, b, 2c a, b, 2c	 0, 0, 1/2 0, 0, 1/2 0, 0, 1/2 0, 0, 1/2
[3] $a' = 3a$			
$Pbam$ (55) $Pbam$ (55) $Pbam$ (55)	$\langle 2; 5; 3 + (1, 0, 0) \rangle$ $\langle (2; 5) + (2, 0, 0); 3 + (3, 0, 0) \rangle$ $\langle (2; 5) + (4, 0, 0); 3 + (5, 0, 0) \rangle$	3a, b, c 3a, b, c 3a, b, c	 1, 0, 0 2, 0, 0
[3] $b' = 3b$			
$Pbam$ (55) $Pbam$ (55) $Pbam$ (55)	$\langle 2; 5; 3 + (0, 1, 0) \rangle$ $\langle (2; 5) + (0, 2, 0); 3 + (0, 1, 0) \rangle$ $\langle (2; 5) + (0, 4, 0); 3 + (0, 1, 0) \rangle$	a, 3b, c a, 3b, c a, 3b, c	 0, 1, 0 0, 2, 0
[3] $c' = 3c$			
$Pbam$ (55) $Pbam$ (55) $Pbam$ (55)	$\langle 2; 3; 5 \rangle$ $\langle 2; (3; 5) + (0, 0, 2) \rangle$ $\langle 2; (3; 5) + (0, 0, 4) \rangle$	a, b, 3c a, b, 3c a, b, 3c	 0, 0, 1 0, 0, 2

• Series of maximal isomorphic subgroups

[p] $a' = pa$	$Pbam$ (55) $\langle (2; 5) + (2u, 0, 0); 3 + (\frac{p}{2} - \frac{1}{2} + 2u, 0, 0) \rangle$ $p > 2; 0 \leq u < p$ p conjugate subgroups for the prime p	pa, b, c	$u, 0, 0$
[p] $b' = pb$	$Pbam$ (55) $\langle (2; 5) + (0, 2u, 0); 3 + (0, \frac{p}{2} - \frac{1}{2}, 0) \rangle$ $p > 2; 0 \leq u < p$ p conjugate subgroups for the prime p	a, pb, c	$0, u, 0$
[p] $c' = pc$	$Pbam$ (55) $\langle 2; (3; 5) + (0, 0, 2u) \rangle$ $p > 2; 0 \leq u < p$ p conjugate subgroups for the prime p	a, b, pc	$0, 0, u$

I Minimal translationengleiche supergroups

 [2] $P4/mbm$ (127); [2] $P4_2/mbc$ (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] $a' = \frac{1}{2}a$ $Pbmm$ (51, $Pmma$); [2] $b' = \frac{1}{2}b$ $Pmam$ (51, $Pmma$)