

$p6mm$

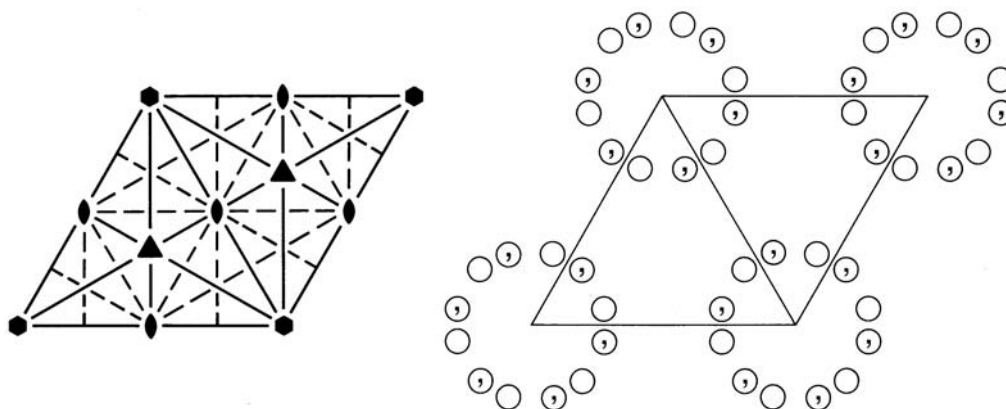
$6mm$

Hexagonal

No. 17

$p6mm$

Patterson symmetry $p6mm$



Origin at $6mm$

Asymmetric unit $0 \leq x \leq \frac{2}{3}; 0 \leq y \leq \frac{1}{3}; x \leq (1+y)/2; y \leq x/2$
 Vertices $0,0 \quad \frac{1}{2},0 \quad \frac{2}{3},\frac{1}{3}$

Symmetry operations

- (1) 1 (2) $3^+ 0,0$ (3) $3^- 0,0$
- (4) $2 0,0$ (5) $6^- 0,0$ (6) $6^+ 0,0$
- (7) $m x,\bar{x}$ (8) $m x,2x$ (9) $m 2x,x$
- (10) $m x,x$ (11) $m x,0$ (12) $m 0,y$

Generators selected (1); $t(1,0)$; $t(0,1)$; (2); (4); (7)

Positions

Multiplicity, Wyckoff letter, Site symmetry	Coordinates	Reflection conditions
12 <i>f</i> 1	(1) x,y (2) $\bar{y},x-y$ (3) $\bar{x}+y,\bar{x}$ (4) \bar{x},\bar{y} (5) $y,\bar{x}+y$ (6) $x-y,x$ (7) \bar{y},\bar{x} (8) $\bar{x}+y,y$ (9) $x,x-y$ (10) y,x (11) $x-y,\bar{y}$ (12) $\bar{x},\bar{x}+y$	General: no conditions Special: no extra conditions
6 <i>e</i> . <i>m</i> .	x,\bar{x} $x,2x$ $2\bar{x},\bar{x}$ \bar{x},x $\bar{x},2\bar{x}$ $2x,x$	
6 <i>d</i> . . <i>m</i>	$x,0$ $0,x$ \bar{x},\bar{x} $\bar{x},0$ $0,\bar{x}$ x,x	
3 <i>c</i> 2 <i>m m</i>	$\frac{1}{2},0$ $0,\frac{1}{2}$ $\frac{1}{2},\frac{1}{2}$	
2 <i>b</i> 3 <i>m</i> .	$\frac{1}{3},\frac{2}{3}$ $\frac{2}{3},\frac{1}{3}$	
1 <i>a</i> 6 <i>m m</i>	$0,0$	