

$cm11$

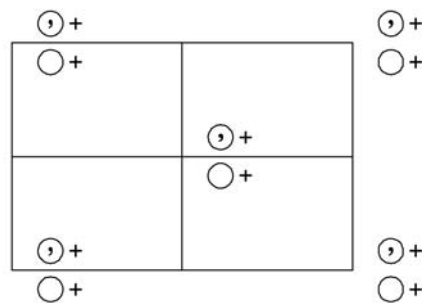
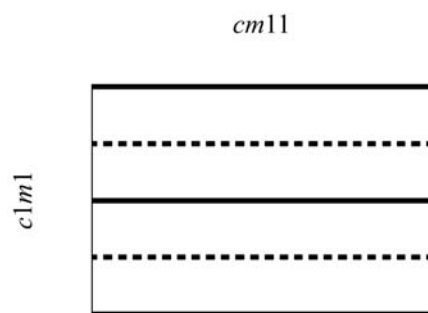
m

Monoclinic/Rectangular

No. 13

$cm11$

Patterson symmetry $c2/m11$



Origin on mirror plane m

Asymmetric unit $0 \leq x \leq \frac{1}{4}; 0 \leq y \leq 1$

Symmetry operations

For $(0,0,0)+$ set

- (1) 1 (2) $m \ 0,y,z$

For $(\frac{1}{2},\frac{1}{2},0)+$ set

- (1) $t(\frac{1}{2},\frac{1}{2},0)$ (2) $b \ \frac{1}{4},y,z$

Generators selected (1); $t(1,0,0)$; $t(0,1,0)$; $t(\frac{1}{2}, \frac{1}{2}, 0)$; (2)

Positions

Multiplicity, Wyckoff letter, Site symmetry	Coordinates		Reflection conditions
	$(0,0,0)+$	$(\frac{1}{2}, \frac{1}{2}, 0)+$	General:
4 <i>b</i> 1	(1) x, y, z	(2) \bar{x}, y, z	$hk: h+k=2n$ $h0: h=2n$ $0k: k=2n$
2 <i>a</i> <i>m</i>	$0, y, z$		Special: no extra conditions

Symmetry of special projections

Along [001] $c1m1$ $\mathbf{a}' = \mathbf{a}$ $\mathbf{b}' = \mathbf{b}_p$ Origin at $0, 0, z$	Along [100] $\bar{1}111$ $\mathbf{a}' = \frac{1}{2}\mathbf{b}$ Origin at $x, 0, 0$	Along [010] $\bar{1}m1$ $\mathbf{a}' = \frac{1}{2}\mathbf{a}$ Origin at $0, y, 0$
--	--	---

Maximal non-isotypic subgroups

I	$[2]c1(p1, 1)$	$1+$
IIa	$[2]pb11(12)$	$1; 2 + (\frac{1}{2}, \frac{1}{2}, 0)$
	$[2]pm11(11)$	$1; 2$
IIb	none	

Maximal isotypic subgroups of lowest index

IIc $[3]cm11(\mathbf{a}' = 3\mathbf{a})(13)$

Minimal non-isotypic supergroups

I	$[2]c2/m11(18)$; $[2]cmm2(26)$; $[2]cm2m(35)$; $[2]cm2e(36)$; $[3]p3m1(69)$; $[3]p31m(70)$
II	$[2]pm11(\mathbf{a}' = \frac{1}{2}\mathbf{a}, \mathbf{b}' = \frac{1}{2}\mathbf{b})(11)$