## General Positions of the Group P6/mmm (No. 191)

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N-	(x,y,z) form	Maduin Sama	Symmetry operation	
No.		Matrix form	ITA	Seitz 1
1	x,y,z	1 0 0 0 0 1 0 0 0 0 1 0	1	{1 0}
2	-y,x-y,z	$ \left(\begin{array}{ccccc} 0 & -1 & 0 & 0 \\ 1 & -1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{array}\right) $	3 <sup>+</sup> 0,0,z	{ 3 <sup>+</sup> <sub>001</sub>   0 }
3	-x+y,-x,z	$ \left(\begin{array}{cccccccccccccccccccccccccccccccccccc$	3 <sup>-</sup> 0,0,z	{ 3-001   0 }
4	-x,-y,z	$ \left(\begin{array}{cccccc} -1 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{array}\right) $	2 0,0,z	{2 <sub>001</sub>   0}
5	y,-x+y,z	$ \left(\begin{array}{ccccc} 0 & 1 & 0 & 0 \\ -1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{array}\right) $	6 <sup>-</sup> 0,0,z	{ 6 <sup>-</sup> 001   0 }
6	x-y,x,z	$ \left(\begin{array}{cccccccccccccccccccccccccccccccccccc$	6 <sup>+</sup> 0,0,z	{ 6 <sup>+</sup> <sub>001</sub>   0 }
7	y,x,-z	( 0 1 0 0 1 0 0 0 0 0 -1 0	2 x,x,0	{ 2 <sub>110</sub>   0 }

8	X-y,-y,-Z	1 -1 0 0 -1 0 0 0 -1		of Space Groups 2 x,0,0	{2 <sub>100</sub>   0}
9	-x,-x+y,-z	-1 0 0 -1 1 0 0 0 -1	0 0	2 0,y,0	{2 <sub>010</sub>   0}
10	-y,-x,-z	0 -1 0 -1 0 0 0 0 -1	0 0	2 x,-x,0	{ 2 <sub>1-10</sub>   0 }
11	-x+y,y,-z	-1 1 0 0 1 0 0 0 -1	0 )	2 x,2x,0	{2 <sub>120</sub>   0}
12	x,x-y,-z	1 0 0 1 -1 0 0 0 -1	0 0	2 2x,x,0	{2 <sub>210</sub>   0}
13	-x,-y,-z	$ \begin{pmatrix} -1 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & -1 \end{pmatrix} $	0 0	-1 0,0,0	{-1 0}
14	y,-x+y,-z	0 1 0 -1 1 0 0 0 -1	0 )	-3 <sup>+</sup> 0,0,z; 0,0,0	{ -3 <sup>+</sup> <sub>001</sub>   0 }
15	x-y,x,-z	1 -1 0 1 0 0 0 0 -1	0 0	-3 <sup>-</sup> 0,0,z; 0,0,0	{ -3 <sup>-</sup> 001   0 }
16	x,y,-z	1 0 0 0 1 0 0 0 -1	0 0	m x,y,0	{ m <sub>001</sub>   0 }
17	-y,x-y,-z	0 -1 0 1 -1 0 0 0 -1	0 )	-6 <sup>-</sup> 0,0,z; 0,0,0	{ -6 <sup>-</sup> 001   0 }

		General Positions of Space Groups					
18	-x+y,-x,-z	$ \left(\begin{array}{cccccccccccccccccccccccccccccccccccc$	0 )	-6 <sup>+</sup> 0,0,z; 0,0,0	{ -6 <sup>+</sup> 001   0 }		
19	-y,-x,z	0 -1 0 -1 0 0 0 0 1	o o o	m x,-x,z	{ m <sub>110</sub>   0 }		
20	-x+y,y,z	$ \left(\begin{array}{cccccccccccccccccccccccccccccccccccc$	0 0 0	m x,2x,z	{ m <sub>100</sub>   0 }		
21	x,x-y,z	1 0 0 1 -1 0 0 0 1	0 0 0	m 2x,x,z	{ m <sub>010</sub>   0 }		
22	y,x,z	0 1 0 1 0 0 0 0 1	0 0 0	m x,x,z	{ m <sub>1-10</sub>   0 }		
23	x-y,-y,z	1 -1 0 0 -1 0 0 0 1	0 0 0	m x,0,z	{ m <sub>120</sub>   0 }		
24	-x,-x+y,z	$ \begin{pmatrix} -1 & 0 & 0 \\ -1 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix} $	0 0 0	m 0,y,z	{ m <sub>210</sub>   0 }		

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