MPG No. 37.4.154 $\bar{6}'m2'$ (-6'2'm setting) [Type III, hexagonal] [M tensor]

* Rank 0 tensor. * Rank 1 tensor. * Rank 2 tensor (s). * Rank 2 tensor (a).

$$\begin{bmatrix} 0 & M_{xy} & 0 \\ -M_{xy} & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$

$M_{xy} = T^{(1)}_{pz}$

* Rank 3 tensor (s).

$$\begin{bmatrix} 0 & M_{xxy} & 0 \\ 0 & -M_{xxy} & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ M_{xxy} & 0 & 0 \end{bmatrix}$$

$M_{xxy} = M^{(1)}_{f1}$

* Rank 3 tensor (a). * Rank 4 tensor (sss). * Rank 4 tensor (ssa).

$$\begin{bmatrix} 0 & 0 & 0 & 0 & 0 & M_{xxxy} \\ 0 & 0 & 0 & 0 & 0 & -M_{xxxy} \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & M_{yzzx} & 0 \\ 0 & 0 & 0 & -M_{yzzx} & 0 & 0 \\ -M_{xxxy} & M_{xxxy} & 0 & 0 & 0 & 0 \end{bmatrix}$$

$M_{xxxy} = -2T^{(1)}_{faz} + 2T^{(1)}_{pz}$

$M_{yzzx} = -4T^{(1)}_{faz} - T^{(1)}_{pz}$

* Rank 4 tensor (aas). * Rank 4 tensor (aaa).

$$\begin{bmatrix} 0 & M_{yzzx} & 0 \\ -M_{yzzx} & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$

$M_{yzzx} = -T^{(2)}_{pz}$

* Rank 4 tensor (sa).

$$\begin{bmatrix} 0 & 0 & M_{xxxy} \\ 0 & 0 & M_{xxxy} \\ 0 & 0 & M_{zzxy} \\ 0 & M_{yzzx} & 0 \\ M_{yzzx} & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$

$M_{xxxy} = -T^{(2)}_{faz} + T^{(3)}_{pz}$

$M_{zzxy} = 2T^{(2)}_{faz} + T^{(3)}_{pz} + 2T^{(4)}_{pz}$

$M_{yzzx} = -T^{(2)}_{faz} + T^{(4)}_{pz}$

* Rank 4 tensor (as).

$$\begin{bmatrix} 0 & 0 & 0 & 0 & M_{yzzx} & 0 \\ 0 & 0 & 0 & M_{yzzx} & 0 & 0 \\ M_{xyxx} & M_{xyxx} & M_{xyzz} & 0 & 0 & 0 \end{bmatrix}$$

$$M_{yzzx} = -T^{(3)}_{faz} + T^{(6)}_{pz}$$
$$M_{xyxx} = -T^{(3)}_{faz} + T^{(5)}_{pz}$$
$$M_{xyzz} = 2T^{(3)}_{faz} + T^{(5)}_{pz} + 2T^{(6)}_{pz}$$

* Rank 4 tensor (s).

$$\begin{bmatrix} 0 & 0 & 0 & 0 & 0 & M_{xxxy} & 0 & 0 & M_{xxyx} \\ 0 & 0 & 0 & 0 & 0 & -M_{xxyx} & 0 & 0 & -M_{xxxy} \\ 0 & 0 & 0 & 0 & 0 & M_{zzxy} & 0 & 0 & -M_{zzxy} \\ 0 & 0 & 0 & 0 & M_{yzzx} & 0 & 0 & M_{yzxz} & 0 \\ 0 & 0 & 0 & -M_{yzxz} & 0 & 0 & -M_{yzzx} & 0 & 0 \\ -\frac{M_{xxxy}}{2} - \frac{M_{xxyx}}{2} & \frac{M_{xxxy}}{2} + \frac{M_{xxyx}}{2} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$M_{xxxy} = -2T^{(1)}_{faz} - T^{(2)}_{faz} + 2T^{(1)}_{pz} + T^{(3)}_{pz}$$
$$M_{xxyx} = -2T^{(1)}_{faz} + T^{(2)}_{faz} + 2T^{(1)}_{pz} - T^{(3)}_{pz}$$
$$M_{zzxy} = 2T^{(2)}_{faz} + T^{(3)}_{pz} + 2T^{(4)}_{pz}$$
$$M_{yzzx} = -4T^{(1)}_{faz} - T^{(2)}_{faz} - T^{(1)}_{pz} + T^{(4)}_{pz}$$
$$M_{yzxz} = -4T^{(1)}_{faz} + T^{(2)}_{faz} - T^{(1)}_{pz} - T^{(4)}_{pz}$$

* Rank 4 tensor (a).

$$\begin{bmatrix} 0 & 0 & 0 & 0 & M_{yzzx} & 0 & 0 & M_{yzxz} & 0 \\ 0 & 0 & 0 & M_{yzxz} & 0 & 0 & M_{yzzx} & 0 & 0 \\ M_{xyxx} & M_{xyxx} & M_{xyzz} & 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$M_{yzzx} = -T^{(3)}_{faz} - T^{(2)}_{pz} + T^{(6)}_{pz}$$
$$M_{yzxz} = -T^{(3)}_{faz} + T^{(2)}_{pz} + T^{(6)}_{pz}$$
$$M_{xyxx} = -T^{(3)}_{faz} + T^{(5)}_{pz}$$
$$M_{xyzz} = 2T^{(3)}_{faz} + T^{(5)}_{pz} + 2T^{(6)}_{pz}$$

* Rank 4 tensor (t).