MPG No. 25.5.150 $6'mm'$ (6'm'm setting) [Type III, hexagonal] [M tensor]

* Rank 0 tensor. * Rank 1 tensor. * Rank 2 tensor (s). * Rank 2 tensor (a). * Rank 3 tensor (s).

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

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

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

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

$$M_{xxyz} = M_{gb}^{(1)}$$

* Rank 4 tensor (ssa).

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

$$M_{xxyz} = 2T_{f2}^{(1)}$$

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

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

$$M_{xxyz} = T_{f2}^{(2)}$$

* Rank 4 tensor (as).

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

$$M_{yzxx} = T_{f2}^{(3)}$$

* Rank 4 tensor (s).

$$\begin{bmatrix} 0 & 0 & 0 & M_{xxyz} & 0 & 0 & M_{xxzy} & 0 & 0 \\ 0 & 0 & 0 & -M_{xxyz} & 0 & 0 & -M_{xxzy} & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ M_{yzxx} & -M_{yzxx} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & M_{yzxx} & 0 & 0 & M_{yzxx} \\ 0 & 0 & 0 & 0 & M_{xxzy} & 0 & 0 & M_{xxyz} & 0 \end{bmatrix}$$

$$M_{xxyz} = M_{gb}^{(1)} + 2T_{f2}^{(1)} + T_{f2}^{(2)}$$
$$M_{xxzy} = M_{gb}^{(1)} + 2T_{f2}^{(1)} - T_{f2}^{(2)}$$
$$M_{yzxx} = M_{gb}^{(1)} - 2T_{f2}^{(1)}$$

* Rank 4 tensor (a).

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

$$M_{yzxx} = T_{f2}^{(3)}$$

* Rank 4 tensor (t).

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

$$M_{yyyz} = -M_{gb}^{(1)}$$