

MPG No. 27.8.156 6'/mmm' (6'/mm'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). \* 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).

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

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

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

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

\* 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).

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

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