

MPG No. 27.5.104 $6'/m'mm'$ ($6'/m'mm'$ setting) [Type III, hexagonal] [T 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).

$$\begin{bmatrix} 0 & 0 & 0 & T_{xyz} & 0 & 0 \\ 0 & 0 & 0 & -T_{xyz} & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ T_{xyz} & -T_{xyz} & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & T_{xyz} \\ 0 & 0 & 0 & 0 & T_{xyz} & 0 \end{bmatrix}$$

$$T_{xyz} = T_{gb}^{(1)}$$

* Rank 4 tensor (ssa).

$$\begin{bmatrix} 0 & 0 & 0 & T_{xyz} & 0 & 0 \\ 0 & 0 & 0 & -T_{xyz} & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ -T_{xyz} & T_{xyz} & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & -T_{xyz} \\ 0 & 0 & 0 & 0 & T_{xyz} & 0 \end{bmatrix}$$

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

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

$$\begin{bmatrix} T_{xyz} & 0 & 0 \\ -T_{xyz} & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & -T_{xyz} & 0 \end{bmatrix}$$

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

* Rank 4 tensor (as).

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

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

* Rank 4 tensor (s).

$$\begin{bmatrix} 0 & 0 & 0 & T_{xyz} & 0 & 0 & T_{xxzy} & 0 & 0 \\ 0 & 0 & 0 & -T_{xyz} & 0 & 0 & -T_{xxzy} & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ T_{yzxx} & -T_{yzxx} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & T_{yzxx} & 0 & 0 & T_{yzxx} \\ 0 & 0 & 0 & 0 & T_{xxzy} & 0 & 0 & T_{xyz} & 0 \end{bmatrix}$$

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

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

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

* Rank 4 tensor (a).

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

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

* Rank 4 tensor (t).

$$\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & T_{yyyyz} \\ 0 & 0 & 0 \\ 0 & T_{yyyyz} & 0 \\ 0 & 0 & 0 \\ 0 & 0 & -T_{yyyyz} \\ 0 & 0 & 0 \\ 0 & -T_{yyyyz} & 0 \\ 0 & 0 & 0 \\ -T_{yyyyz} & 0 & 0 \end{bmatrix}$$

$$T_{yyyyz} = -T_{gb}^{(1)}$$