

MPG No. 37.5.155 $\bar{6}m'2'$ (-62'm' setting) [Type III, hexagonal] [T tensor]

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

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

$$T_{xy} = M_{pz}^{(1)}$$

* Rank 3 tensor (s).

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

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

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

$$\begin{bmatrix} 0 & 0 & 0 & 0 & 0 & T_{xxx} \\ 0 & 0 & 0 & 0 & 0 & -T_{xxx} \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & T_{yzz} & 0 \\ 0 & 0 & 0 & -T_{yzz} & 0 & 0 \\ -T_{xxx} & T_{xxx} & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$T_{xxx} = -2M_{faz}^{(1)} + 2M_{pz}^{(1)}$$

$$T_{yzz} = -4M_{faz}^{(1)} - M_{pz}^{(1)}$$

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

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

$$T_{yzz} = -M_{pz}^{(2)}$$

* Rank 4 tensor (sa).

$$\begin{bmatrix} 0 & 0 & T_{xxx} \\ 0 & 0 & T_{xxx} \\ 0 & 0 & T_{zzz} \\ 0 & T_{yzz} & 0 \\ T_{yzz} & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$

$$T_{xxx} = -M_{faz}^{(2)} + M_{pz}^{(3)}$$

$$T_{zzz} = 2M_{faz}^{(2)} + M_{pz}^{(3)} + 2M_{pz}^{(4)}$$

$$T_{yzz} = -M_{faz}^{(2)} + M_{pz}^{(4)}$$

* Rank 4 tensor (as).

$$\begin{bmatrix} 0 & 0 & 0 & 0 & T_{yzz} & 0 \\ 0 & 0 & 0 & T_{yzz} & 0 & 0 \\ T_{xyxx} & T_{xyxx} & T_{xyzz} & 0 & 0 & 0 \end{bmatrix}$$

$$T_{yzzx} = -M_{faz}^{(3)} + M_{pz}^{(6)}$$

$$T_{xyxx} = -M_{faz}^{(3)} + M_{pz}^{(5)}$$

$$T_{xyzx} = 2M_{faz}^{(3)} + M_{pz}^{(5)} + 2M_{pz}^{(6)}$$

* Rank 4 tensor (s).

$$\begin{bmatrix} 0 & 0 & 0 & 0 & 0 & T_{xxxy} & 0 & 0 & T_{xxyx} \\ 0 & 0 & 0 & 0 & 0 & -T_{xxyx} & 0 & 0 & -T_{xxxxy} \\ 0 & 0 & 0 & 0 & 0 & T_{zzxy} & 0 & 0 & -T_{zzxy} \\ 0 & 0 & 0 & 0 & T_{yzxx} & 0 & 0 & T_{yzxx} & 0 \\ 0 & 0 & 0 & 0 & -T_{yzxx} & 0 & 0 & -T_{yzxx} & 0 \\ -\frac{T_{xxxx}}{2} - \frac{T_{xxyx}}{2} & \frac{T_{xxxx}}{2} + \frac{T_{xxyx}}{2} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$T_{xxxx} = -2M_{faz}^{(1)} - M_{faz}^{(2)} + 2M_{pz}^{(1)} + M_{pz}^{(3)}$$

$$T_{xxyx} = -2M_{faz}^{(1)} + M_{faz}^{(2)} + 2M_{pz}^{(1)} - M_{pz}^{(3)}$$

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

$$T_{yzxx} = -4M_{faz}^{(1)} - M_{faz}^{(2)} - M_{pz}^{(1)} + M_{pz}^{(4)}$$

$$T_{yzxz} = -4M_{faz}^{(1)} + M_{faz}^{(2)} - M_{pz}^{(1)} - M_{pz}^{(4)}$$

* Rank 4 tensor (a).

$$\begin{bmatrix} 0 & 0 & 0 & 0 & T_{yzzx} & 0 & 0 & T_{yzxz} & 0 \\ 0 & 0 & 0 & T_{yzxx} & 0 & 0 & T_{yzxx} & 0 & 0 \\ T_{xyxx} & T_{xxyx} & T_{xyzz} & 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$T_{yzxx} = -M_{faz}^{(3)} - M_{pz}^{(2)} + M_{pz}^{(6)}$$

$$T_{yzxz} = -M_{faz}^{(3)} + M_{pz}^{(2)} + M_{pz}^{(6)}$$

$$T_{xyxx} = -M_{faz}^{(3)} + M_{pz}^{(5)}$$

$$T_{xyzz} = 2M_{faz}^{(3)} + M_{pz}^{(5)} + 2M_{pz}^{(6)}$$

* Rank 4 tensor (t).