

MPG No. 4.3.11 m' [Type III, monoclinic] [T tensor]

* Rank 0 tensor. * Rank 1 tensor.

$$[0 \quad T_y \quad 0]$$

$$T_y = T_{py}^{(1)}$$

* Rank 2 tensor (s).

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

$$T_{xy} = T_{dxz}^{(1)}$$

$$T_{yz} = T_{dyz}^{(1)}$$

* Rank 2 tensor (a).

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

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

$$T_{yz} = M_{px}^{(1)}$$

* Rank 3 tensor (s).

$$\begin{bmatrix} 0 & T_{xxy} & 0 \\ 0 & T_{yyy} & 0 \\ 0 & T_{zzy} & 0 \\ T_{yxx} & 0 & T_{yzz} \\ 0 & T_{zxy} & 0 \\ T_{xyx} & 0 & T_{xyz} \end{bmatrix}$$

$$T_{xxy} = 2M_{dxz}^{(1)} - T_{fay}^{(1)} - T_{fbz}^{(1)} + T_{py}^{(1)}$$

$$T_{yyy} = 2T_{fay}^{(1)} + T_{py}^{(1)} + 2T_{py}^{(2)}$$

$$T_{zzy} = -2M_{dxz}^{(1)} - T_{fay}^{(1)} + T_{fbz}^{(1)} + T_{py}^{(1)}$$

$$T_{yxx} = -3M_{du}^{(1)} - M_{dv}^{(1)} + T_{f3}^{(1)}$$

$$T_{yzz} = M_{dxz}^{(1)} - T_{fay}^{(1)} + T_{fbz}^{(1)} + T_{py}^{(2)}$$

$$T_{zxy} = 3M_{du}^{(1)} - M_{dv}^{(1)} + T_{f3}^{(1)}$$

$$T_{xyx} = -M_{dxz}^{(1)} - T_{fay}^{(1)} - T_{fbz}^{(1)} + T_{py}^{(2)}$$

$$T_{xyz} = 2M_{dv}^{(1)} + T_{f3}^{(1)}$$

* Rank 3 tensor (a).

$$\begin{bmatrix} T_{yxx} & 0 & T_{yzz} \\ 0 & T_{zxy} & 0 \\ T_{xyx} & 0 & T_{xyz} \end{bmatrix}$$

$$T_{yxx} = -M_{du}^{(2)} + M_{dv}^{(2)} + M_s^{(1)}$$

$$T_{yzz} = M_{dxz}^{(2)} - T_{py}^{(3)}$$

$$T_{zxy} = -M_{du}^{(2)} - M_{dv}^{(2)} + M_s^{(1)}$$

$$T_{xyx} = M_{dxz}^{(2)} + T_{py}^{(3)}$$

$$T_{xyz} = 2M_{dv}^{(2)} + M_s^{(1)}$$

* Rank 4 tensor (sss).

$$\begin{bmatrix} 0 & 0 & 0 & T_{xxyz} & 0 & T_{xxxy} \\ 0 & 0 & 0 & T_{yyyz} & 0 & T_{yyxy} \\ 0 & 0 & 0 & T_{zzyz} & 0 & T_{zzxy} \\ T_{xxyz} & T_{yyyz} & T_{zzyz} & 0 & T_{yzzx} & 0 \\ 0 & 0 & 0 & T_{yzzx} & 0 & T_{zxxy} \\ T_{xxxy} & T_{yyxy} & T_{zzxy} & 0 & T_{zxxy} & 0 \end{bmatrix}$$

$$T_{xxyz} = T_{dyz}^{(1)} + 2T_{gdx}^{(1)}$$

$$T_{xxxy} = T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{gaz}^{(1)} - T_{gbz}^{(1)}$$

$$T_{yyyz} = T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{gax}^{(1)} - T_{gdx}^{(1)}$$

$$T_{yyxy} = T_{dxy}^{(1)} + 2T_{dxy}^{(2)} - T_{gaz}^{(1)} - T_{gbz}^{(1)}$$

$$T_{zzyz} = T_{dyz}^{(1)} + 2T_{dyz}^{(2)} - T_{gax}^{(1)} - T_{gdx}^{(1)}$$

$$T_{zzxy} = T_{dxy}^{(1)} + 2T_{gdx}^{(1)}$$

$$T_{yzzx} = T_{dxy}^{(2)} + 2T_{gdx}^{(1)}$$

$$T_{zxxy} = T_{dyz}^{(2)} + 2T_{gdx}^{(1)}$$

* Rank 4 tensor (ssa).

$$\begin{bmatrix} 0 & 0 & 0 & T_{xxyz} & 0 & T_{xxxy} \\ 0 & 0 & 0 & T_{yyyz} & 0 & T_{yyxy} \\ 0 & 0 & 0 & T_{zzyz} & 0 & T_{zzxy} \\ -T_{xxyz} & -T_{yyyz} & -T_{zzyz} & 0 & T_{yzzx} & 0 \\ 0 & 0 & 0 & -T_{yzzx} & 0 & T_{zxxy} \\ -T_{xxxy} & -T_{yyxy} & -T_{zzxy} & 0 & -T_{zxxy} & 0 \end{bmatrix}$$

$$T_{xxyz} = -4M_{fbx}^{(1)} + T_{dyz}^{(3)}$$

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

$$T_{yyyz} = -2M_{fax}^{(1)} + 2M_{fbx}^{(1)} + 2M_{px}^{(1)} + T_{dyz}^{(3)}$$

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

$$T_{zzyz} = 2M_{fax}^{(1)} + 2M_{fbx}^{(1)} - 2M_{px}^{(1)} + T_{dyz}^{(3)}$$

$$T_{zzxy} = -4M_{fbz}^{(1)} + T_{dxy}^{(3)}$$

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

$$T_{zxxy} = -4M_{fax}^{(1)} - M_{px}^{(1)}$$

* Rank 4 tensor (aas).

$$\begin{bmatrix} 0 & T_{yzzx} & 0 \\ T_{yzzx} & 0 & T_{zxxy} \\ 0 & T_{zxxy} & 0 \end{bmatrix}$$

$$T_{yzzx} = 2T_{dxy}^{(4)}$$

$$T_{zxxy} = 2T_{dyz}^{(4)}$$

* Rank 4 tensor (aaa).

$$\begin{bmatrix} 0 & T_{yzzx} & 0 \\ -T_{yzzx} & 0 & T_{zxxy} \\ 0 & -T_{zxxy} & 0 \end{bmatrix}$$

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

$$T_{zxxy} = -M_{px}^{(2)}$$

* Rank 4 tensor (sa).

$$\begin{bmatrix} T_{xxyz} & 0 & T_{xxxy} \\ T_{yyyz} & 0 & T_{yyxy} \\ T_{zzyz} & 0 & T_{zzxy} \\ 0 & T_{yzzx} & 0 \\ T_{zxyz} & 0 & T_{zxxy} \\ 0 & T_{xyzx} & 0 \end{bmatrix}$$

$$\begin{aligned} T_{xxyz} &= 2M_{fax}^{(2)} + M_{px}^{(3)} + 2M_{px}^{(4)} \\ T_{xxxy} &= -M_{faz}^{(2)} + M_{fbz}^{(2)} + M_{pz}^{(3)} - 2T_{dxy}^{(5)} \\ T_{yyyz} &= -M_{fax}^{(2)} + M_{fbz}^{(2)} + M_{px}^{(3)} - 2T_{dyz}^{(5)} \\ T_{yyxy} &= -M_{faz}^{(2)} - M_{fbz}^{(2)} + M_{pz}^{(3)} + 2T_{dxy}^{(5)} \\ T_{zzyz} &= -M_{fax}^{(2)} - M_{fbz}^{(2)} + M_{px}^{(3)} + 2T_{dyz}^{(5)} \\ T_{zzxy} &= 2M_{faz}^{(2)} + M_{pz}^{(3)} + 2M_{pz}^{(4)} \\ T_{yzzx} &= -M_{faz}^{(2)} - M_{fbz}^{(2)} + M_{pz}^{(4)} - T_{dxy}^{(5)} \\ T_{zxyz} &= -M_{faz}^{(2)} + M_{fbz}^{(2)} + M_{pz}^{(4)} + T_{dxy}^{(5)} \\ T_{zxxy} &= -M_{fax}^{(2)} - M_{fbz}^{(2)} + M_{px}^{(4)} - T_{dyz}^{(5)} \\ T_{xyzx} &= -M_{faz}^{(2)} + M_{fbz}^{(2)} + M_{px}^{(4)} + T_{dyz}^{(5)} \end{aligned}$$

* Rank 4 tensor (as).

$$\begin{bmatrix} T_{yzxx} & T_{yzyy} & T_{yzzz} & 0 & T_{yzzx} & 0 \\ 0 & 0 & 0 & T_{zxyz} & 0 & T_{zxxy} \\ T_{xyxx} & T_{xyyy} & T_{xyzz} & 0 & T_{xyzx} & 0 \end{bmatrix}$$

$$\begin{aligned} T_{yzxx} &= 2M_{fax}^{(3)} + M_{px}^{(5)} + 2M_{px}^{(6)} \\ T_{yzyy} &= -M_{faz}^{(3)} + M_{fbz}^{(3)} + M_{px}^{(5)} - 2T_{dyz}^{(6)} \\ T_{yzzz} &= -M_{fax}^{(3)} - M_{fbz}^{(3)} + M_{px}^{(5)} + 2T_{dyz}^{(6)} \\ T_{yzzx} &= -M_{faz}^{(3)} + M_{fbz}^{(3)} + M_{pz}^{(6)} + T_{dxy}^{(6)} \\ T_{zxyz} &= -M_{faz}^{(3)} - M_{fbz}^{(3)} + M_{pz}^{(6)} - T_{dxy}^{(6)} \\ T_{zxxy} &= -M_{fax}^{(3)} + M_{fbz}^{(3)} + M_{px}^{(6)} + T_{dyz}^{(6)} \\ T_{xyxx} &= -M_{faz}^{(3)} + M_{fbz}^{(3)} + M_{pz}^{(5)} - 2T_{dxy}^{(6)} \\ T_{xyyy} &= -M_{faz}^{(3)} - M_{fbz}^{(3)} + M_{pz}^{(5)} + 2T_{dxy}^{(6)} \\ T_{xyzz} &= 2M_{faz}^{(3)} + M_{pz}^{(5)} + 2M_{pz}^{(6)} \\ T_{xyzx} &= -M_{fax}^{(3)} - M_{fbz}^{(3)} + M_{px}^{(6)} - T_{dyz}^{(6)} \end{aligned}$$

* Rank 4 tensor (s).

$$\begin{bmatrix} 0 & 0 & 0 & T_{xxyz} & 0 & T_{xxxy} & T_{xxzy} & 0 & T_{xxyx} \\ 0 & 0 & 0 & T_{yyyz} & 0 & T_{yyxy} & T_{yyzy} & 0 & T_{yyyx} \\ 0 & 0 & 0 & T_{zzyz} & 0 & T_{zzxy} & T_{zzzy} & 0 & T_{zzyx} \\ T_{yzxx} & T_{yzyy} & T_{yzzz} & 0 & T_{yzzx} & 0 & 0 & T_{yzzz} & 0 \\ 0 & 0 & 0 & T_{zxyz} & 0 & T_{zxxy} & T_{zxzy} & 0 & T_{zxxy} \\ T_{xyxx} & T_{xyyy} & T_{xyzz} & 0 & T_{xyzx} & 0 & 0 & T_{xyxz} & 0 \end{bmatrix}$$

$$\begin{aligned}
T_{xxyz} &= 2M_{fax}^{(2)} - 4M_{fbx}^{(1)} + M_{px}^{(3)} + 2M_{px}^{(4)} + T_{dyz}^{(1)} + T_{dyz}^{(3)} + 2T_{gbx}^{(1)} \\
T_{xxxz} &= -2M_{faz}^{(1)} - M_{faz}^{(2)} + 2M_{fbz}^{(1)} + M_{fbz}^{(2)} + 2M_{pz}^{(1)} + M_{pz}^{(3)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} - 2T_{dxy}^{(5)} + T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{xxzy} &= -2M_{fax}^{(2)} - 4M_{fbx}^{(1)} - M_{px}^{(3)} - 2M_{px}^{(4)} + T_{dyz}^{(1)} + T_{dyz}^{(3)} + 2T_{gbx}^{(1)} \\
T_{xxyx} &= -2M_{faz}^{(1)} + M_{faz}^{(2)} + 2M_{fbz}^{(1)} - M_{fbz}^{(2)} + 2M_{pz}^{(1)} - M_{pz}^{(3)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} + 2T_{dxy}^{(5)} + T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{yyyz} &= -2M_{fax}^{(1)} - M_{faz}^{(2)} + 2M_{fbx}^{(1)} + M_{fbx}^{(2)} + 2M_{px}^{(1)} + M_{px}^{(3)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} - 2T_{dxy}^{(5)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yyxy} &= 2M_{faz}^{(1)} - M_{faz}^{(2)} + 2M_{fbz}^{(1)} - M_{fbz}^{(2)} - 2M_{pz}^{(1)} + M_{pz}^{(3)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} + 2T_{dxy}^{(5)} - T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{yyzy} &= -2M_{fax}^{(1)} + M_{fax}^{(2)} + 2M_{fbx}^{(1)} - M_{fbx}^{(2)} + 2M_{px}^{(1)} - M_{px}^{(3)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} + 2T_{dxy}^{(5)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yyyy} &= 2M_{faz}^{(1)} + M_{faz}^{(2)} + 2M_{fbz}^{(1)} + M_{fbz}^{(2)} - 2M_{pz}^{(1)} - M_{pz}^{(3)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} - 2T_{dxy}^{(5)} - T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{zzyz} &= 2M_{fax}^{(1)} - M_{fax}^{(2)} + 2M_{fbx}^{(1)} - M_{fbx}^{(2)} - 2M_{px}^{(1)} + M_{px}^{(3)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} + 2T_{dxy}^{(5)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zzxy} &= 2M_{faz}^{(2)} - 4M_{fbz}^{(1)} + M_{pz}^{(3)} + 2M_{pz}^{(4)} + T_{dxy}^{(1)} + T_{dxy}^{(3)} + 2T_{gbz}^{(1)} \\
T_{zzzy} &= 2M_{fax}^{(1)} + M_{fax}^{(2)} + 2M_{fbx}^{(1)} - M_{fbx}^{(2)} - 2M_{px}^{(1)} - M_{px}^{(3)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} - 2T_{dxy}^{(5)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zzyx} &= -2M_{faz}^{(2)} - 4M_{fbz}^{(1)} - M_{pz}^{(3)} - 2M_{pz}^{(4)} + T_{dxy}^{(1)} + T_{dxy}^{(3)} + 2T_{gbz}^{(1)} \\
T_{yzxx} &= 4M_{fbx}^{(1)} + T_{dyz}^{(1)} - T_{dyz}^{(3)} + 2T_{gbx}^{(1)} \\
T_{yzyy} &= 2M_{fax}^{(1)} - 2M_{fbx}^{(1)} - 2M_{px}^{(1)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} - T_{dxy}^{(3)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yzzz} &= -2M_{fax}^{(1)} - 2M_{fbx}^{(1)} + 2M_{px}^{(1)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} - T_{dxy}^{(3)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yzzx} &= -4M_{faz}^{(1)} - M_{faz}^{(2)} - M_{fbz}^{(2)} - M_{pz}^{(1)} + M_{pz}^{(4)} + T_{dxy}^{(2)} - T_{dxy}^{(5)} + 2T_{gbz}^{(1)} \\
T_{yzxz} &= -4M_{faz}^{(1)} + M_{faz}^{(2)} + M_{fbz}^{(2)} - M_{pz}^{(1)} - M_{pz}^{(4)} + T_{dxy}^{(2)} + T_{dxy}^{(5)} + 2T_{gbz}^{(1)} \\
T_{zxyz} &= 4M_{faz}^{(1)} - M_{faz}^{(2)} + M_{fbz}^{(2)} + M_{pz}^{(1)} + M_{pz}^{(4)} + T_{dxy}^{(1)} + T_{dxy}^{(5)} + 2T_{gbz}^{(1)} \\
T_{zxxz} &= -4M_{fax}^{(1)} - M_{fax}^{(2)} - M_{fbx}^{(1)} - M_{px}^{(1)} + M_{px}^{(4)} + T_{dxy}^{(2)} - T_{dxy}^{(5)} + 2T_{gbx}^{(1)} \\
T_{zxzy} &= 4M_{faz}^{(1)} + M_{faz}^{(2)} - M_{fbz}^{(2)} + M_{pz}^{(1)} - M_{pz}^{(4)} + T_{dxy}^{(2)} - T_{dxy}^{(5)} + 2T_{gbz}^{(1)} \\
T_{zxyx} &= -4M_{fax}^{(1)} + M_{fax}^{(2)} + M_{fbx}^{(2)} - M_{px}^{(1)} - M_{px}^{(4)} + T_{dxy}^{(2)} + T_{dxy}^{(5)} + 2T_{gbx}^{(1)} \\
T_{xyxx} &= 2M_{faz}^{(1)} - 2M_{fbz}^{(1)} - 2M_{pz}^{(1)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} - T_{dxy}^{(3)} + T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{xyyy} &= -2M_{faz}^{(1)} - 2M_{fbz}^{(1)} + 2M_{pz}^{(1)} + T_{dxy}^{(1)} + 2T_{dxy}^{(2)} - T_{dxy}^{(3)} - T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{xyzz} &= 4M_{fbz}^{(1)} + T_{dxy}^{(1)} - T_{dxy}^{(3)} + 2T_{gbz}^{(1)} \\
T_{xyzx} &= 4M_{fax}^{(1)} - M_{fax}^{(2)} + M_{fbx}^{(2)} + M_{px}^{(1)} + M_{px}^{(4)} + T_{dxy}^{(2)} + T_{dxy}^{(5)} + 2T_{gbx}^{(1)} \\
T_{xyxz} &= 4M_{faz}^{(1)} + M_{faz}^{(2)} - M_{fbx}^{(2)} + M_{px}^{(1)} - M_{px}^{(4)} + T_{dxy}^{(2)} - T_{dxy}^{(5)} + 2T_{gbx}^{(1)}
\end{aligned}$$

* Rank 4 tensor (a).

$$\begin{bmatrix}
T_{yzxx} & T_{yzyy} & T_{yzzz} & 0 & T_{yzzx} & 0 & 0 & T_{yzxz} & 0 \\
0 & 0 & 0 & T_{zxyz} & 0 & T_{zxxz} & T_{zxzy} & 0 & T_{zxyx} \\
T_{xyxx} & T_{xyyy} & T_{xyzz} & 0 & T_{xyzx} & 0 & 0 & T_{xyxz} & 0
\end{bmatrix}$$

$$\begin{aligned}
T_{yzxx} &= 2M_{fax}^{(3)} + M_{px}^{(5)} + 2M_{px}^{(6)} \\
T_{yzyy} &= -M_{fax}^{(3)} + M_{fbx}^{(3)} + M_{px}^{(5)} - 2T_{dyz}^{(6)} \\
T_{yzzz} &= -M_{fax}^{(3)} - M_{fbz}^{(3)} + M_{px}^{(5)} + 2T_{dyz}^{(6)} \\
T_{yzxz} &= -M_{faz}^{(3)} + M_{fbz}^{(3)} - M_{pz}^{(2)} + M_{pz}^{(6)} + 2T_{dxy}^{(4)} + T_{dxy}^{(6)} \\
T_{yzxz} &= -M_{fax}^{(3)} + M_{fbz}^{(3)} + M_{pz}^{(2)} + M_{pz}^{(6)} - 2T_{dxy}^{(4)} + T_{dxy}^{(6)} \\
T_{zxyz} &= -M_{faz}^{(3)} - M_{fbz}^{(3)} + M_{pz}^{(2)} + M_{pz}^{(6)} + 2T_{dxy}^{(4)} - T_{dxy}^{(6)} \\
T_{zxxz} &= -M_{fax}^{(3)} + M_{fbx}^{(3)} - M_{px}^{(2)} + M_{px}^{(6)} + 2T_{dyz}^{(4)} + T_{dyz}^{(6)} \\
T_{zxzy} &= -M_{faz}^{(3)} - M_{fbz}^{(3)} - M_{pz}^{(2)} + M_{pz}^{(6)} - 2T_{dxy}^{(4)} - T_{dxy}^{(6)} \\
T_{zxyx} &= -M_{fax}^{(3)} + M_{fbz}^{(3)} + M_{px}^{(2)} + M_{px}^{(6)} - 2T_{dyz}^{(4)} + T_{dyz}^{(6)} \\
T_{xyxx} &= -M_{faz}^{(3)} + M_{fbz}^{(3)} + M_{pz}^{(5)} - 2T_{dxy}^{(6)} \\
T_{xyyy} &= -M_{faz}^{(3)} - M_{fbz}^{(3)} + M_{pz}^{(5)} + 2T_{dxy}^{(6)} \\
T_{xyzz} &= 2M_{faz}^{(3)} + M_{pz}^{(5)} + 2M_{pz}^{(6)} \\
T_{xyzx} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} + M_{px}^{(2)} + M_{px}^{(6)} + 2T_{dyz}^{(4)} - T_{dyz}^{(6)} \\
T_{xyxz} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} - M_{px}^{(2)} + M_{px}^{(6)} - 2T_{dyz}^{(4)} - T_{dyz}^{(6)}
\end{aligned}$$

* Rank 4 tensor (t).

$$\left[\begin{array}{ccc}
0 & T_{xxyy} & 0 \\
T_{yyyx} & 0 & T_{yyyz} \\
0 & T_{zzzy} & 0 \\
0 & T_{yyzy} & 0 \\
0 & T_{zzxy} & 0 \\
T_{xxyx} & 0 & T_{xxyz} \\
T_{yzzx} & 0 & T_{yzzz} \\
0 & T_{zxxz} & 0 \\
0 & T_{xyyy} & 0 \\
-\frac{T_{yyyz}}{2} + \frac{T_{yyzy}}{2} + T_{zxxz} & 0 & \frac{T_{xxyx}}{2} - \frac{T_{xxyz}}{2} + T_{xyyy} - T_{yyyx} + T_{zxxz}
\end{array} \right]$$

$$\begin{aligned}
T_{xxxz} &= T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} - 2T_{dxy}^{(5)} + T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{yyyx} &= T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} - 2T_{dxy}^{(5)} - T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{yyyz} &= T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} - 2T_{dyz}^{(5)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zzzy} &= T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} - 2T_{dyz}^{(5)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yyzy} &= T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} + 2T_{dyz}^{(5)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zzxy} &= T_{dxy}^{(1)} + T_{dxy}^{(3)} + 2T_{gbz}^{(1)} \\
T_{xxyx} &= T_{dxy}^{(1)} + 2T_{dxy}^{(2)} + T_{dxy}^{(3)} + 2T_{dxy}^{(5)} + T_{gaz}^{(1)} - T_{gbz}^{(1)} \\
T_{xxyz} &= T_{dyz}^{(1)} + T_{dyz}^{(3)} + 2T_{gbx}^{(1)} \\
T_{yzzx} &= T_{dyz}^{(2)} - T_{dyz}^{(5)} + 2T_{gbx}^{(1)} \\
T_{yzzz} &= T_{dyz}^{(1)} + 2T_{dyz}^{(2)} - T_{dyz}^{(3)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zxxz} &= T_{dyz}^{(2)} - T_{dyz}^{(5)} + 2T_{gbx}^{(1)} \\
T_{xyyy} &= T_{dxy}^{(1)} + 2T_{dxy}^{(2)} - T_{dxy}^{(3)} - T_{gaz}^{(1)} - T_{gbz}^{(1)}
\end{aligned}$$