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

$$\begin{bmatrix} 0 & M_{xy} & 0 \\ M_{xy} & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$

$M_{xy} = M_{dxy}^{(1)}$

* Rank 2 tensor (a).

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

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

* Rank 3 tensor (s).

$$\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ M_{yzx} & 0 & 0 \\ 0 & M_{zxy} & 0 \\ 0 & 0 & M_{xyz} \end{bmatrix}$$

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

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

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

* Rank 3 tensor (a).

$$\begin{bmatrix} M_{yzx} & 0 & 0 \\ 0 & M_{zxy} & 0 \\ 0 & 0 & M_{xyz} \end{bmatrix}$$

$M_{yzx} = -T_{du}^{(2)} + T_{dv}^{(2)} + T_{s}^{(1)}$

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

$M_{xyz} = 2T_{du}^{(2)} + T_{s}^{(1)}$

* Rank 4 tensor (sss).

$$\begin{bmatrix} 0 & 0 & 0 & 0 & 0 & M_{xxxy} \\ 0 & 0 & 0 & 0 & 0 & M_{yyxy} \\ 0 & 0 & 0 & 0 & 0 & M_{zzxy} \\ 0 & 0 & 0 & 0 & M_{yzzx} & 0 \\ 0 & 0 & 0 & M_{yzzx} & 0 & 0 \\ M_{xxxy} & M_{yyxy} & M_{zzxy} & 0 & 0 & 0 \end{bmatrix}$$

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

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

$M_{zzxy} = M_{dxy}^{(1)} + 2M_{gbz}^{(1)}$

$M_{yzzx} = M_{dxy}^{(2)} + 2M_{gbz}^{(1)}$

* Rank 4 tensor (ssa).

$$
\begin{bmatrix}
0 & 0 & 0 & 0 & 0 & M_{xxxy} \\
0 & 0 & 0 & 0 & 0 & M_{yyxy} \\
0 & 0 & 0 & 0 & 0 & M_{zzxy} \\
0 & 0 & 0 & 0 & M_{yzzx} & 0 \\
0 & 0 & 0 & -M_{yzzx} & 0 & 0 \\
-M_{xxxy} & -M_{yyxy} & -M_{zzxy} & 0 & 0 & 0
\end{bmatrix}
$$

$$M_{xxxy} = M_{dxy}^{(3)} - 2T_{faz}^{(1)} + 2T_{fbz}^{(1)} + 2T_{pz}^{(1)}$$
$$M_{yyxy} = M_{dxy}^{(3)} + 2T_{faz}^{(1)} + 2T_{fbz}^{(1)} - 2T_{pz}^{(1)}$$
$$M_{zzxy} = M_{dxy}^{(3)} - 4T_{fbz}^{(1)}$$
$$M_{yzzx} = -4T_{faz}^{(1)} - T_{pz}^{(1)}$$

* Rank 4 tensor (aas).

$$
\begin{bmatrix}
0 & M_{yzzx} & 0 \\
M_{yzzx} & 0 & 0 \\
0 & 0 & 0
\end{bmatrix}
$$

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

* Rank 4 tensor (aaa).

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

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

* Rank 4 tensor (sa).

$$
\begin{bmatrix}
0 & 0 & M_{xxxy} \\
0 & 0 & M_{yyxy} \\
0 & 0 & M_{zzxy} \\
0 & M_{yzzx} & 0 \\
M_{zxyz} & 0 & 0 \\
0 & 0 & 0
\end{bmatrix}
$$

$$M_{xxxy} = -2M_{dxy}^{(5)} - T_{faz}^{(2)} + T_{fbz}^{(2)} + T_{pz}^{(3)}$$
$$M_{yyxy} = 2M_{dxy}^{(5)} - T_{faz}^{(2)} - T_{fbz}^{(2)} + T_{pz}^{(3)}$$
$$M_{zzxy} = 2T_{faz}^{(2)} + T_{pz}^{(3)} + 2T_{pz}^{(4)}$$
$$M_{yzzx} = -M_{dxy}^{(5)} - T_{faz}^{(2)} - T_{fbz}^{(2)} + T_{pz}^{(4)}$$
$$M_{zxyz} = M_{dxy}^{(5)} - T_{faz}^{(2)} + T_{fbz}^{(2)} + T_{pz}^{(4)}$$

* Rank 4 tensor (as).

$$
\begin{bmatrix}
0 & 0 & 0 & 0 & M_{yzzx} & 0 \\
0 & 0 & 0 & M_{zxyz} & 0 & 0 \\
M_{xyxx} & M_{xyyy} & M_{xyzz} & 0 & 0 & 0
\end{bmatrix}
$$

$$M_{yzzx} = M_{dxy}^{(6)} - T_{faz}^{(3)} + T_{fbz}^{(3)} + T_{pz}^{(6)}$$
$$M_{zxyz} = -M_{dxy}^{(6)} - T_{faz}^{(3)} - T_{fbz}^{(3)} + T_{pz}^{(6)}$$
$$M_{xyxx} = -2M_{dxy}^{(6)} - T_{faz}^{(3)} + T_{fbz}^{(3)} + T_{pz}^{(5)}$$
$$M_{xyyy} = 2M_{dxy}^{(6)} - T_{faz}^{(3)} - T_{fbz}^{(3)} + T_{pz}^{(5)}$$
$$M_{xyzz} = 2T_{faz}^{(3)} + T_{pz}^{(5)} + 2T_{pz}^{(6)}$$

* Rank 4 tensor (s).

$$
\begin{bmatrix}
0 & 0 & 0 & 0 & 0 & M_{xxxy} & 0 & 0 & M_{xxyx} \\
0 & 0 & 0 & 0 & 0 & M_{yyxy} & 0 & 0 & M_{yyyx} \\
0 & 0 & 0 & 0 & 0 & M_{zzxy} & 0 & 0 & M_{zzyx} \\
0 & 0 & 0 & 0 & M_{yzzx} & 0 & 0 & M_{yzxz} & 0 \\
0 & 0 & 0 & M_{zxyz} & 0 & 0 & M_{zxzy} & 0 & 0 \\
M_{xyxx} & M_{xyyy} & M_{xyzz} & 0 & 0 & 0 & 0 & 0 & 0
\end{bmatrix}
$$

$$M_{xxxy} = M_{dxy}^{(1)} + 2M_{dxy}^{(2)} + M_{dxy}^{(3)} - 2M_{dxy}^{(5)} + M_{gaz}^{(1)} - M_{gbz}^{(1)} - 2T_{faz}^{(1)} - T_{faz}^{(2)} + 2T_{fbz}^{(1)} + T_{fbz}^{(2)} + 2T_{pz}^{(1)} + T_{pz}^{(3)}$$

$$M_{xxyx} = M_{dxy}^{(1)} + 2M_{dxy}^{(2)} + M_{dxy}^{(3)} + 2M_{dxy}^{(5)} + M_{gaz}^{(1)} - M_{gbz}^{(1)} - 2T_{faz}^{(1)} + T_{faz}^{(2)} + 2T_{fbz}^{(1)} - T_{fbz}^{(2)} + 2T_{pz}^{(1)} - T_{pz}^{(3)}$$

$$M_{yyxy} = M_{dxy}^{(1)} + 2M_{dxy}^{(2)} + M_{dxy}^{(3)} + 2M_{dxy}^{(5)} - M_{gaz}^{(1)} - M_{gbz}^{(1)} + 2T_{faz}^{(1)} - T_{faz}^{(2)} + 2T_{fbz}^{(1)} - T_{fbz}^{(2)} - 2T_{pz}^{(1)} + T_{pz}^{(3)}$$

$$M_{yyyx} = M_{dxy}^{(1)} + 2M_{dxy}^{(2)} + M_{dxy}^{(3)} - 2M_{dxy}^{(5)} - M_{gaz}^{(1)} - M_{gbz}^{(1)} + 2T_{faz}^{(1)} + T_{faz}^{(2)} + 2T_{fbz}^{(1)} + T_{fbz}^{(2)} - 2T_{pz}^{(1)} - T_{pz}^{(3)}$$

$$M_{zzxy} = M_{dxy}^{(1)} + M_{dxy}^{(3)} + 2M_{gbz}^{(1)} + 2T_{faz}^{(2)} - 4T_{fbz}^{(1)} + T_{pz}^{(3)} + 2T_{pz}^{(4)}$$

$$M_{zzyx} = M_{dxy}^{(1)} + M_{dxy}^{(3)} + 2M_{gbz}^{(1)} - 2T_{faz}^{(2)} - 4T_{fbz}^{(1)} - T_{pz}^{(3)} - 2T_{pz}^{(4)}$$

$$M_{yzzx} = M_{dxy}^{(2)} - M_{dxy}^{(5)} + 2M_{gbz}^{(1)} - 4T_{faz}^{(1)} - T_{faz}^{(2)} - T_{fbz}^{(2)} - T_{pz}^{(1)} + T_{pz}^{(4)}$$

$$M_{yzxz} = M_{dxy}^{(2)} + M_{dxy}^{(5)} + 2M_{gbz}^{(1)} - 4T_{faz}^{(1)} + T_{faz}^{(2)} + T_{fbz}^{(2)} - T_{pz}^{(1)} - T_{pz}^{(4)}$$

$$M_{zxyz} = M_{dxy}^{(2)} + M_{dxy}^{(5)} + 2M_{gbz}^{(1)} + 4T_{faz}^{(1)} - T_{faz}^{(2)} + T_{fbz}^{(2)} + T_{pz}^{(1)} + T_{pz}^{(4)}$$

$$M_{zxzy} = M_{dxy}^{(2)} - M_{dxy}^{(5)} + 2M_{gbz}^{(1)} + 4T_{faz}^{(1)} + T_{faz}^{(2)} - T_{fbz}^{(2)} + T_{pz}^{(1)} - T_{pz}^{(4)}$$

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

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

$$M_{xyzz} = M_{dxy}^{(1)} - M_{dxy}^{(3)} + 2M_{gbz}^{(1)} + 4T_{fbz}^{(1)}$$

* Rank 4 tensor (a).

$$
\begin{bmatrix}
0 & 0 & 0 & 0 & M_{yzzx} & 0 & 0 & M_{yzxz} & 0 \\
0 & 0 & 0 & M_{zxyz} & 0 & 0 & M_{zxzy} & 0 & 0 \\
M_{xyxx} & M_{xyyy} & M_{xyzz} & 0 & 0 & 0 & 0 & 0 & 0
\end{bmatrix}
$$

$$M_{yzzx} = 2M_{dxy}^{(4)} + M_{dxy}^{(6)} - T_{faz}^{(3)} + T_{fbz}^{(3)} - T_{pz}^{(2)} + T_{pz}^{(6)}$$

$$M_{yzxz} = -2M_{dxy}^{(4)} + M_{dxy}^{(6)} - T_{faz}^{(3)} + T_{fbz}^{(3)} + T_{pz}^{(2)} + T_{pz}^{(6)}$$

$$M_{zxyz} = 2M_{dxy}^{(4)} - M_{dxy}^{(6)} - T_{faz}^{(3)} - T_{fbz}^{(3)} + T_{pz}^{(2)} + T_{pz}^{(6)}$$

$$M_{zxzy} = -2M_{dxy}^{(4)} - M_{dxy}^{(6)} - T_{faz}^{(3)} - T_{fbz}^{(3)} - T_{pz}^{(2)} + T_{pz}^{(6)}$$

$$M_{xyxx} = -2M_{dxy}^{(6)} - T_{faz}^{(3)} + T_{fbz}^{(3)} + T_{pz}^{(5)}$$

$$M_{xyyy} = 2M_{dxy}^{(6)} - T_{faz}^{(3)} - T_{fbz}^{(3)} + T_{pz}^{(5)}$$

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

* Rank 4 tensor (t).

$$
\begin{bmatrix}
0 & M_{xxxy} & 0 \\
M_{yyyx} & 0 & 0 \\
0 & 0 & 0 \\
0 & 0 & 0 \\
0 & M_{zzxy} & 0 \\
M_{xxyx} & 0 & 0 \\
M_{yzzx} & 0 & 0 \\
0 & 0 & 0 \\
0 & M_{xyyy} & 0 \\
0 & 0 & \frac{M_{xxxy}}{2} - \frac{M_{xxyx}}{2} + M_{xyyy} - M_{yyyx} + M_{zzxy}
\end{bmatrix}
$$

$$M_{xxxy} = M_{dxy}^{(1)} + 2M_{dxy}^{(2)} + M_{dxy}^{(3)} - 2M_{dxy}^{(5)} + M_{gaz}^{(1)} - M_{gbz}^{(1)}$$

$$M_{yyyx} = M_{dxy}^{(1)} + 2M_{dxy}^{(2)} + M_{dxy}^{(3)} - 2M_{dxy}^{(5)} - M_{gaz}^{(1)} - M_{gbz}^{(1)}$$

$$M_{zzxy} = M_{dxy}^{(1)} + M_{dxy}^{(3)} + 2M_{gbz}^{(1)}$$

$$M_{xxyx} = M_{dxy}^{(1)} + 2M_{dxy}^{(2)} + M_{dxy}^{(3)} + 2M_{dxy}^{(5)} + M_{gaz}^{(1)} - M_{gbz}^{(1)}$$

$$M_{yzzx} = M_{dxy}^{(2)} - M_{dxy}^{(5)} + 2M_{gbz}^{(1)}$$

$$M_{xyyy} = M_{dxy}^{(1)} + 2M_{dxy}^{(2)} - M_{dxy}^{(3)} - M_{gaz}^{(1)} - M_{gbz}^{(1)}$$