* Rank 0 tensor.

$$[M]$$

$$M = M_s^{(1)}$$

* Rank 1 tensor.

$$\begin{bmatrix} 0 & 0 & M_z \end{bmatrix}$$

$$M_z = M_{pz}^{(1)}$$

* Rank 2 tensor (s).

$$\begin{bmatrix} M_{xx} & 0 & 0 \\ 0 & M_{xx} & 0 \\ 0 & 0 & M_{zz} \end{bmatrix}$$

$$M_{xx} = -M_{du}^{(1)} + M_s^{(1)}$$
$$M_{zz} = 2M_{du}^{(1)} + M_s^{(1)}$$

* 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).

$$\begin{bmatrix} 0 & 0 & M_{xxz} \\ 0 & 0 & M_{xxz} \\ 0 & 0 & M_{zzz} \\ M_{yzx} & M_{yzy} & 0 \\ M_{yzy} & -M_{yzx} & 0 \\ 0 & 0 & 0 \end{bmatrix}$$

$$M_{xxz} = -M_{faz}^{(1)} + M_{pz}^{(1)}$$
$$M_{zzz} = 2M_{faz}^{(1)} + M_{pz}^{(1)} + 2M_{pz}^{(2)}$$
$$M_{yzx} = -3T_{du}^{(1)}$$
$$M_{yzy} = -M_{faz}^{(1)} + M_{pz}^{(2)}$$

* Rank 3 tensor (a).

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

$$M_{yzx} = -T_{du}^{(2)} + T_s^{(1)}$$
$$M_{yzy} = M_{pz}^{(3)}$$
$$M_{xyz} = 2T_{du}^{(2)} + T_s^{(1)}$$

* Rank 4 tensor (sss).

$$
\begin{bmatrix}
M_{xxxx} & M_{xxyy} & M_{xxzz} & 0 & 0 & M_{xxxy} \\
M_{xxyy} & M_{xxxx} & M_{xxzz} & 0 & 0 & -M_{xxxy} \\
M_{xxzz} & M_{xxzz} & M_{zzzz} & 0 & 0 & 0 \\
0 & 0 & 0 & M_{yzyz} & 0 & 0 \\
0 & 0 & 0 & 0 & M_{yzyz} & 0 \\
M_{xxxy} & -M_{xxxy} & 0 & 0 & 0 & M_{xyxy}
\end{bmatrix}
$$

$$M_{xxxx} = -2M_{du}^{(1)} - 4M_{du}^{(2)} - M_{gu}^{(1)} + 2M_g^{(1)} + M_s^{(1)} + 2M_s^{(2)}$$

$$M_{xxyy} = -2M_{du}^{(1)} + 2M_{gu}^{(1)} - M_g^{(1)} + M_s^{(1)}$$

$$M_{xxzz} = M_{du}^{(1)} - M_{gu}^{(1)} - M_g^{(1)} + M_s^{(1)}$$

$$M_{xxxy} = M_{gaz}^{(1)}$$

$$M_{zzzz} = 4M_{du}^{(1)} + 8M_{du}^{(2)} + 2M_{gu}^{(1)} + 2M_g^{(1)} + M_s^{(1)} + 2M_s^{(2)}$$

$$M_{yzyz} = M_{du}^{(2)} - M_{gu}^{(1)} - M_g^{(1)} + M_s^{(2)}$$

$$M_{xyxy} = -2M_{du}^{(2)} + 2M_{gu}^{(1)} - M_g^{(1)} + M_s^{(2)}$$

* Rank 4 tensor (ssa).

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

$$M_{xxzz} = 3M_{du}^{(3)}$$

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

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

* Rank 4 tensor (aas).

$$
\begin{bmatrix}
M_{yzyz} & 0 & 0 \\
0 & M_{yzyz} & 0 \\
0 & 0 & M_{xyxy}
\end{bmatrix}
$$

$$M_{yzyz} = -2M_{du}^{(4)} + M_s^{(3)}$$

$$M_{xyxy} = 4M_{du}^{(4)} + M_s^{(3)}$$

* 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).

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

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

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

$$M_{yzyz} = -3M_{du}^{(5)}$$

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

* Rank 4 tensor (as).

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

$$M_{yzyz} = -3M_{du}^{(6)}$$

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

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

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

* Rank 4 tensor (s).

$$
\begin{bmatrix}
M_{xxxx} & M_{xxyy} & M_{xxzz} & 0 & 0 & M_{xxxy} & 0 & 0 & M_{xxyx} \\
M_{xxyy} & M_{xxxx} & M_{xxzz} & 0 & 0 & -M_{xxyx} & 0 & 0 & -M_{xxxy} \\
M_{zzxx} & M_{zzxx} & M_{zzzz} & 0 & 0 & M_{zzxy} & 0 & 0 & -M_{zzxy} \\
0 & 0 & 0 & M_{yzyz} & M_{yzzx} & 0 & M_{yzzy} & M_{yzxz} & 0 \\
0 & 0 & 0 & -M_{yzxz} & M_{yzzy} & 0 & -M_{yzzx} & M_{yzyz} & 0 \\
M_{xyxx} & -M_{xyxx} & 0 & 0 & 0 & M_{xyxy} & 0 & 0 & M_{xyxy}
\end{bmatrix}
$$

$$M_{xxxx} = -2M_{du}^{(1)} - 4M_{du}^{(2)} - M_{gu}^{(1)} + 2M_g^{(1)} + M_s^{(1)} + 2M_s^{(2)}$$

$$M_{xxyy} = -2M_{du}^{(1)} + 2M_{gu}^{(1)} - M_g^{(1)} + M_s^{(1)}$$

$$M_{xxzz} = M_{du}^{(1)} + 3M_{du}^{(3)} - M_{gu}^{(1)} - M_g^{(1)} + M_s^{(1)}$$

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

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

$$M_{zzxx} = M_{du}^{(1)} - 3M_{du}^{(3)} - M_{gu}^{(1)} - M_g^{(1)} + M_s^{(1)}$$

$$M_{zzzz} = 4M_{du}^{(1)} + 8M_{du}^{(2)} + 2M_{gu}^{(1)} + 2M_g^{(1)} + M_s^{(1)} + 2M_s^{(2)}$$

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

$$M_{yzyz} = M_{du}^{(2)} - 3M_{du}^{(5)} - M_{gu}^{(1)} - M_g^{(1)} + M_s^{(2)}$$

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

$$M_{yzzy} = M_{du}^{(2)} + 3M_{du}^{(5)} - M_{gu}^{(1)} - M_g^{(1)} + M_s^{(2)}$$

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

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

$$M_{xyxy} = -2M_{du}^{(2)} + 2M_{gu}^{(1)} - M_g^{(1)} + M_s^{(2)}$$

* Rank 4 tensor (a).

$$
\begin{bmatrix}
0 & 0 & 0 & M_{yzyz} & M_{yzzx} & 0 & M_{yzzy} & M_{yzxz} & 0 \\
0 & 0 & 0 & M_{yzxz} & -M_{yzzy} & 0 & M_{yzzx} & -M_{yzyz} & 0 \\
M_{xyxx} & M_{xyxx} & M_{xyzz} & 0 & 0 & M_{xyxy} & 0 & 0 & -M_{xyxy}
\end{bmatrix}
$$

$$M_{yzyz} = -2M_{du}^{(4)} - 3M_{du}^{(6)} + M_{s}^{(3)}$$
$$M_{yzzx} = -T_{faz}^{(3)} - T_{pz}^{(2)} + T_{pz}^{(6)}$$
$$M_{yzzy} = 2M_{du}^{(4)} - 3M_{du}^{(6)} - M_{s}^{(3)}$$
$$M_{yzxz} = -T_{faz}^{(3)} + T_{pz}^{(2)} + T_{pz}^{(6)}$$
$$M_{xyxx} = -T_{faz}^{(3)} + T_{pz}^{(5)}$$
$$M_{xyzz} = 2T_{faz}^{(3)} + T_{pz}^{(5)} + 2T_{pz}^{(6)}$$
$$M_{xyxy} = 4M_{du}^{(4)} + M_{s}^{(3)}$$

* Rank 4 tensor (t).

$$
\begin{bmatrix}
M_{xxxx} & M_{xxxy} & 0 \\
-M_{xxxy} & M_{xxxx} & 0 \\
0 & 0 & M_{zzzz} \\
0 & 0 & M_{yyzz} \\
M_{zzxx} & 0 & 0 \\
M_{xxxy} & M_{xxyy} & 0 \\
0 & M_{yzzy} & 0 \\
0 & 0 & M_{zxxz} \\
M_{xxyy} + M_{yyzz} - M_{yzzy} - M_{zxxz} + M_{zzxx} & -M_{xxxy} & 0 \\
0 & 0 & 0
\end{bmatrix}
$$

$$M_{xxxx} = -2M_{du}^{(1)} - 4M_{du}^{(2)} - M_{gu}^{(1)} + 2M_{g}^{(1)} + 3M_{s}^{(1)}$$
$$M_{xxxy} = M_{gaz}^{(1)}$$
$$M_{zzzz} = 4M_{du}^{(1)} + 8M_{du}^{(2)} + 2M_{gu}^{(1)} + 2M_{g}^{(1)} + 3M_{s}^{(1)}$$
$$M_{yyzz} = M_{du}^{(1)} + 3M_{du}^{(3)} - M_{gu}^{(1)} - M_{g}^{(1)} + M_{s}^{(1)}$$
$$M_{zzxx} = M_{du}^{(1)} - 3M_{du}^{(3)} - M_{gu}^{(1)} - M_{g}^{(1)} + M_{s}^{(1)}$$
$$M_{xxyy} = -2M_{du}^{(1)} + 2M_{gu}^{(1)} - M_{g}^{(1)} + M_{s}^{(1)}$$
$$M_{yzzy} = M_{du}^{(2)} + 3M_{du}^{(5)} - M_{gu}^{(1)} - M_{g}^{(1)} + M_{s}^{(1)}$$
$$M_{zxxz} = M_{du}^{(2)} - 3M_{du}^{(5)} - M_{gu}^{(1)} - M_{g}^{(1)} + M_{s}^{(1)}$$