

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

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

$$M_{xx} = M_{dv}^{(1)}$$

\* Rank 2 tensor (a). \* Rank 3 tensor (s). \* Rank 3 tensor (a). \* Rank 4 tensor (sss).

$$\begin{bmatrix} M_{xxxx} & 0 & M_{xxzz} & 0 & 0 & 0 \\ 0 & -M_{xxxx} & -M_{xxzz} & 0 & 0 & 0 \\ M_{xxzz} & -M_{xxzz} & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & M_{yzyz} & 0 & 0 \\ 0 & 0 & 0 & 0 & -M_{yzyz} & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$M_{xxxx} = 2M_{dv}^{(1)} + 4M_{dv}^{(2)} + M_{gv}^{(1)}$$

$$M_{xxzz} = M_{dv}^{(1)} - M_{gv}^{(1)}$$

$$M_{yzyz} = -M_{dv}^{(2)} + M_{gv}^{(1)}$$

\* Rank 4 tensor (ssa).

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

$$M_{xxyy} = -2M_{dv}^{(3)} + 4T_{f3}^{(1)}$$

$$M_{xxzz} = -M_{dv}^{(3)} - 4T_{f3}^{(1)}$$

\* Rank 4 tensor (aas).

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

$$M_{yzyz} = 2M_{dv}^{(4)}$$

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

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

$$M_{yzyz} = -M_{dv}^{(5)} + T_{f3}^{(2)}$$

$$M_{xyxy} = 2M_{dv}^{(5)} + T_{f3}^{(2)}$$

\* Rank 4 tensor (as).

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

$$M_{yzyz} = -M_{dv}^{(6)} + T_{f3}^{(3)}$$

$$M_{xyxy} = 2M_{dv}^{(6)} + T_{f3}^{(3)}$$

\* Rank 4 tensor (s).

$$\begin{bmatrix} M_{xxxx} & M_{xyxy} & M_{xxzz} & 0 & 0 & 0 & 0 & 0 & 0 \\ -M_{xyxy} & -M_{xxxx} & -M_{xxzz} & 0 & 0 & 0 & 0 & 0 & 0 \\ M_{zzxx} & -M_{zzxx} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & M_{yzyz} & 0 & 0 & M_{yzzz} & 0 & 0 \\ 0 & 0 & 0 & 0 & -M_{yzzz} & 0 & 0 & -M_{yzzy} & 0 \\ 0 & 0 & 0 & 0 & 0 & M_{xyxy} & 0 & 0 & -M_{xyxy} \end{bmatrix}$$

$$M_{xxxx} = 2M_{dv}^{(1)} + 4M_{dv}^{(2)} + M_{gv}^{(1)}$$

$$M_{xyxy} = -2M_{dv}^{(3)} + 4T_{f3}^{(1)}$$

$$M_{xxzz} = M_{dv}^{(1)} - M_{dv}^{(3)} - M_{gv}^{(1)} - 4T_{f3}^{(1)}$$

$$M_{zzxx} = M_{dv}^{(1)} + M_{dv}^{(3)} - M_{gv}^{(1)} + 4T_{f3}^{(1)}$$

$$M_{yzyz} = -M_{dv}^{(2)} - M_{dv}^{(5)} + M_{gv}^{(1)} + T_{f3}^{(2)}$$

$$M_{yzzz} = -M_{dv}^{(2)} + M_{dv}^{(5)} + M_{gv}^{(1)} - T_{f3}^{(2)}$$

$$M_{xyxy} = 2M_{dv}^{(5)} + T_{f3}^{(2)}$$

\* Rank 4 tensor (a).

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

$$M_{yzyz} = 2M_{dv}^{(4)} - M_{dv}^{(6)} + T_{f3}^{(3)}$$

$$M_{yzzz} = -2M_{dv}^{(4)} - M_{dv}^{(6)} + T_{f3}^{(3)}$$

$$M_{xyxy} = 2M_{dv}^{(6)} + T_{f3}^{(3)}$$

\* Rank 4 tensor (t).

$$\begin{bmatrix} M_{xxxx} & 0 & 0 \\ 0 & -M_{xxxx} & 0 \\ 0 & 0 & 0 \\ 0 & 0 & M_{yyzz} \\ M_{zzxx} & 0 & 0 \\ 0 & -M_{yyzz} - M_{zzxx} & 0 \\ 0 & M_{yzzz} & 0 \\ 0 & 0 & M_{zzxx} \\ -M_{yzzz} - M_{zzxx} & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$

$$M_{xxxx} = 2M_{dv}^{(1)} + 4M_{dv}^{(2)} + M_{gv}^{(1)}$$

$$M_{yyzz} = -M_{dv}^{(1)} + M_{dv}^{(3)} + M_{gv}^{(1)}$$

$$M_{zzxx} = M_{dv}^{(1)} + M_{dv}^{(3)} - M_{gv}^{(1)}$$

$$M_{yzzz} = -M_{dv}^{(2)} + M_{dv}^{(5)} + M_{gv}^{(1)}$$

$$M_{zzxx} = M_{dv}^{(2)} + M_{dv}^{(5)} - M_{gv}^{(1)}$$