MPG No. 17.1.62 $\bar{3}$ [Type I, trigonal] [G tensor]

* Rank 0 tensor. * Rank 1 tensor.

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

$$G_z = G_{pz}^{(1)}$$

* Rank 2 tensor (s). * Rank 2 tensor (a). * Rank 3 tensor (s).

$$\begin{bmatrix} G_{xxx} & G_{xxy} & G_{xxz} \\ -G_{xxx} & -G_{xxy} & G_{xxz} \\ 0 & 0 & G_{zzz} \\ G_{yzx} & G_{yzy} & 0 \\ G_{yzy} & -G_{yzx} & 0 \\ G_{xxy} & -G_{xxx} & 0 \end{bmatrix}$$

$$G_{xxx} = G_{f2}^{(1)}$$
$$G_{xxy} = G_{f1}^{(1)}$$
$$G_{xxz} = -G_{faz}^{(1)} + G_{pz}^{(1)}$$
$$G_{zzz} = 2G_{faz}^{(1)} + G_{pz}^{(1)} + 2G_{pz}^{(2)}$$
$$G_{yzx} = -3Q_{du}^{(1)}$$
$$G_{yzy} = -G_{faz}^{(1)} + G_{pz}^{(2)}$$

* Rank 3 tensor (a).

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

$$G_{yzx} = -Q_{du}^{(2)} + Q_s^{(1)}$$
$$G_{yzy} = G_{pz}^{(3)}$$
$$G_{xyz} = 2Q_{du}^{(2)} + Q_s^{(1)}$$

* Rank 4 tensor (sss). * Rank 4 tensor (ssa). * Rank 4 tensor (aas). * Rank 4 tensor (aaa). * Rank 4 tensor (sa). * Rank 4 tensor (as). * Rank 4 tensor (s). * Rank 4 tensor (a). * Rank 4 tensor (t).