Fusion data for a solution to the fusion rules for \mathcal{H} , the principal even half of the Haagerup subfactor.

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1 notes

The data presented here are the F-matrices for the principle even half of the Haagerup subfactor. In the following, let $\lambda = i\sqrt{\frac{-1+\sqrt{13}}{6}}$ as in Morrison-Snyder arxiv:1002.0168v2. Object notation is taken from Grossman-Snyder, arxiv:1102.2631v2.

2 F-Matrices

$$\bullet \ F_{abc}^d = \begin{pmatrix} -3\lambda^2 - 1 & -\sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} \\ -\sqrt{-3\lambda^2 - 1} & \lambda^2 & -\lambda^2 - 1 & -\lambda^2 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 - 1 & \lambda^2 & \lambda^2 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 & \lambda^2 + 1 \end{pmatrix}$$

$$- \ F_{\alpha^2 \xi, \alpha^2 \xi, \alpha^2 \xi}^{\alpha^2 \xi}$$

$$\bullet \ F_{abc}^d = \begin{pmatrix} 3\lambda^2 + 1 & \sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & -\lambda^2 - 1 & -\lambda^2 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 - 1 & -\lambda^2 & -\lambda^2 \\ -\sqrt{-3\lambda^2 - 1} & \lambda^2 & \lambda^2 & \lambda^2 + 1 \end{pmatrix}$$

$$- \ F_{\alpha^2 \xi, \xi, \alpha^2 \xi}^{\alpha \xi}, \ F_{\alpha^2 \xi, \alpha \xi, \alpha^2 \xi}^{\xi}$$

$$\bullet \ F^d_{abc} = \begin{pmatrix} -3\lambda^2 - 1 & \sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} \\ -\sqrt{-3\lambda^2 - 1} & -\lambda^2 - 1 & -\lambda^2 & -\lambda^2 \\ \sqrt{-3\lambda^2 - 1} & \lambda^2 & \lambda^2 & \lambda^2 + 1 \\ -\sqrt{-3\lambda^2 - 1} & -\lambda^2 & -\lambda^2 - 1 & -\lambda^2 \end{pmatrix}$$

$$- \ F^{\alpha\xi}_{\alpha\xi,\alpha^2\xi,\alpha^2\xi}, \ F^{\alpha^2\xi}_{\alpha^2\xi,\alpha\xi,\alpha\xi}$$

$$\bullet \ F_{abc}^d = \left(\begin{array}{cccc} -3\lambda^2 - 1 & -\sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} & -\sqrt{-3\lambda^2 - 1} \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 - 1 & \lambda^2 & -\lambda^2 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 & -\lambda^2 - 1 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 + 1 & -\lambda^2 \end{array} \right)$$

$$- F_{\alpha\xi,\alpha\xi,\alpha^2\xi}^{\alpha^2\xi}, F_{\alpha^2\xi,\alpha^2\xi,\alpha\xi}^{\alpha\xi}$$

$$\bullet \ F^d_{abc} = \left(\begin{array}{cccc} -3\lambda^2 - 1 & -\sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} \\ -\sqrt{-3\lambda^2 - 1} & \lambda^2 & -\lambda^2 & -\lambda^2 - 1 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 + 1 & \lambda^2 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 - 1 & \lambda^2 & \lambda^2 \end{array} \right)$$

$$- F^{\alpha\xi}_{\alpha\xi,\alpha\xi,\alpha\xi}$$

$$\bullet \ F^d_{abc} = \left(\begin{array}{cccc} -3\lambda^2 - 1 & \sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} & -\sqrt{-3\lambda^2 - 1} \\ \sqrt{-3\lambda^2 - 1} & \lambda^2 + 1 & \lambda^2 & -\lambda^2 \\ -\sqrt{-3\lambda^2 - 1} & -\lambda^2 & -\lambda^2 & \lambda^2 + 1 \\ \sqrt{-3\lambda^2 - 1} & \lambda^2 & \lambda^2 + 1 & -\lambda^2 \end{array} \right)$$

$$- F^{\xi}_{\alpha\xi,\xi,\alpha^2\xi}, F^{\xi}_{\alpha^2\xi,\xi,\alpha\xi}$$

$$\bullet \ F^d_{abc} = \left(\begin{array}{cccc} 3\lambda^2 + 1 & \sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} & -\sqrt{-3\lambda^2 - 1} \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & -\lambda^2 & \lambda^2 + 1 \\ -\sqrt{-3\lambda^2 - 1} & \lambda^2 & \lambda^2 + 1 & -\lambda^2 \\ -\sqrt{-3\lambda^2 - 1} & \lambda^2 + 1 & \lambda^2 & -\lambda^2 \end{array} \right)$$

$$-F_{\alpha\xi,\xi,\alpha\xi}^{\alpha^2\xi},F_{\alpha\xi,\alpha^2\xi,\alpha\xi}^{\xi}$$

$$\bullet \ F_{abc}^d = \left(\begin{array}{cccc} -3\lambda^2 - 1 & \sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} & -\sqrt{-3\lambda^2 - 1} \\ -\sqrt{-3\lambda^2 - 1} & -\lambda^2 & -\lambda^2 & \lambda^2 + 1 \\ \sqrt{-3\lambda^2 - 1} & \lambda^2 & \lambda^2 + 1 & -\lambda^2 \\ \sqrt{-3\lambda^2 - 1} & \lambda^2 + 1 & \lambda^2 & -\lambda^2 \end{array} \right)$$

$$- F_{\xi,\alpha^2\xi,\alpha^2\xi}^{\xi}, F_{\alpha^2\xi,\xi,\xi}^{\alpha^2\xi}$$

$$\bullet \ F_{abc}^d = \left(\begin{array}{cccc} 3\lambda^2 + 1 & \sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} & -\sqrt{-3\lambda^2 - 1} \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & -\lambda^2 - 1 & \lambda^2 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 - 1 & -\lambda^2 & \lambda^2 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & -\lambda^2 & \lambda^2 + 1 \end{array} \right)$$

$$- F_{\xi,\alpha^2\xi,\alpha\xi}^{\alpha^2\xi}, F_{\alpha\xi,\alpha^2\xi,\xi}^{\alpha^2\xi}$$

$$\bullet \ F^d_{abc} = \left(\begin{array}{cccc} 3\lambda^2 + 1 & \sqrt{-3\lambda^2 - 1} & -\sqrt{-3\lambda^2 - 1} & -\sqrt{-3\lambda^2 - 1} \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 & \lambda^2 + 1 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 + 1 & \lambda^2 \\ -\sqrt{-3\lambda^2 - 1} & \lambda^2 + 1 & -\lambda^2 & -\lambda^2 \end{array} \right)$$

$$- F^{\alpha\xi}_{\xi,\alpha\xi,\alpha^2\xi}, F^{\alpha\xi}_{\alpha^2\xi,\alpha\xi,\xi}$$

$$\bullet \ F^d_{abc} = \left(\begin{array}{cccc} -3\lambda^2 - 1 & \sqrt{-3\lambda^2 - 1} & -\sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} \\ -\sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 + 1 & -\lambda^2 \\ \sqrt{-3\lambda^2 - 1} & \lambda^2 + 1 & -\lambda^2 & \lambda^2 \\ -\sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 & -\lambda^2 - 1 \end{array} \right)$$

$$-F_{\xi,\alpha\xi,\alpha\xi}^{\xi}, F_{\alpha\xi,\xi,\xi}^{\alpha\xi}$$

$$\bullet \ F^d_{abc} = \left(\begin{array}{cccc} -3\lambda^2 - 1 & \sqrt{-3\lambda^2 - 1} & -\sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} \\ \sqrt{-3\lambda^2 - 1} & \lambda^2 + 1 & -\lambda^2 & \lambda^2 \\ \sqrt{-3\lambda^2 - 1} & \lambda^2 & -\lambda^2 & \lambda^2 + 1 \\ -\sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 + 1 & -\lambda^2 \end{array} \right)$$

$$- F_{\xi,\alpha\xi,\xi}^{\alpha^2\xi}, F_{\xi,\alpha^2\xi,\xi}^{\alpha\xi}$$

$$\bullet \ F_{abc}^d = \left(\begin{array}{cccc} -3\lambda^2 - 1 & -\sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 & \lambda^2 + 1 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 + 1 & \lambda^2 \\ -\sqrt{-3\lambda^2 - 1} & \lambda^2 + 1 & -\lambda^2 & -\lambda^2 \end{array} \right)$$

$$- F_{\xi,\xi,\alpha^2\xi}^{\alpha^2\xi}, F_{\alpha^2\xi,\alpha^2\xi,\xi}^{\xi}$$

$$\bullet \ F_{abc}^d = \left(\begin{array}{cccc} -3\lambda^2 - 1 & -\sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} & -\sqrt{-3\lambda^2 - 1} \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 + 1 & -\lambda^2 \\ -\sqrt{-3\lambda^2 - 1} & \lambda^2 + 1 & -\lambda^2 & \lambda^2 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 & -\lambda^2 - 1 \end{array} \right)$$

$$- F^{\alpha\xi}_{\xi,\xi,\alpha\xi}, F^{\xi}_{\alpha\xi,\alpha\xi,\xi}$$

$$\bullet \ F_{abc}^d = \left(\begin{array}{cccc} -3\lambda^2 - 1 & -\sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} & \sqrt{-3\lambda^2 - 1} \\ -\sqrt{-3\lambda^2 - 1} & \lambda^2 + 1 & -\lambda^2 & -\lambda^2 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 & \lambda^2 + 1 \\ \sqrt{-3\lambda^2 - 1} & -\lambda^2 & \lambda^2 + 1 & \lambda^2 \end{array} \right)$$

$$-\ F^{\xi}_{\xi,\xi,\xi}$$

$$\bullet \ F_{abc}^d = \left(\begin{array}{ccc} -\lambda^2 & -\lambda^2 & \frac{1}{2} \left(i \sqrt{1 - 3 \lambda^2} - \lambda^2 \right) \\ \lambda^2 & \frac{1}{2} \left(i \sqrt{1 - 3 \lambda^2} - \lambda^2 \right) & -\lambda^2 \\ \frac{1}{2} \left(\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & -\lambda^2 & \lambda^2 \end{array} \right)$$

$$- F_{\alpha^2 \xi, \alpha \xi, \alpha^2 \xi}^{\alpha^2 \xi}, F_{\alpha^2 \xi, \alpha^2 \xi, \alpha^2 \xi}^{\alpha \xi}$$

$$\bullet \ F_{abc}^d = \left(\begin{array}{ccc} \frac{1}{2} \left(-\lambda^2 - i\sqrt{1 - 3\lambda^2} \right) & -\lambda^2 & -\lambda^2 \\ -\lambda^2 & \lambda^2 & \frac{1}{2} \left(-\lambda^2 - i\sqrt{1 - 3\lambda^2} \right) \\ -\lambda^2 & \frac{1}{2} \left(-\lambda^2 - i\sqrt{1 - 3\lambda^2} \right) \end{array} \right)$$

$$\begin{split} & - \ F^{\alpha\xi}_{abc} = \begin{pmatrix} \lambda^2 \\ -\lambda^2 \\ \frac{1}{2} \left(\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \frac{1}{2} \left(i \sqrt{1 - 3 \lambda^2} - \lambda^2 \right) & \frac{1}{2} \left(\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) \\ - \ F^{\delta}_{abc} = \begin{pmatrix} -\lambda^2 \\ -\lambda^2 \\ \frac{1}{2} \left(\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) \\ - \ F^{\delta}_{\alpha^2 \xi, \xi, \alpha^2 \xi} & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \frac{1}{2} \left(\lambda^2 + i \sqrt{1 - 3 \lambda^2} \right) \\ - \ F^{\alpha}_{abc} = \begin{pmatrix} -\lambda^2 \\ \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) \\ - \ F^{\alpha}_{\alpha \xi, \alpha^2 \xi, \alpha^2 \xi}, F^{\alpha^2 \xi}_{\alpha^2 \xi, \alpha \xi} & \frac{1}{2} \left(i \sqrt{1 - 3 \lambda^2} - \lambda^2 \right) & \lambda^2 \\ - \ F^{\delta}_{abc} = \begin{pmatrix} \frac{1}{2} \left(\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \\ \lambda^2 & -\lambda^2 & \frac{1}{2} \left(\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) \end{pmatrix} \\ - \ F^{\xi}_{\alpha \xi, \alpha^2 \xi, \alpha^2 \xi}, F^{\alpha^2 \xi}_{\alpha^2 \xi, \xi, \alpha \xi} & -\lambda^2 & \frac{1}{2} \left(i \sqrt{1 - 3 \lambda^2} - \lambda^2 \right) \\ - \ F^{\alpha}_{abc} = \begin{pmatrix} \frac{1}{2} \left(i \sqrt{1 - 3 \lambda^2} - \lambda^2 \right) & -\lambda^2 \\ -\lambda^2 & \frac{1}{2} \left(i \sqrt{1 - 3 \lambda^2} - \lambda^2 \right) & \lambda^2 \end{pmatrix} \\ - \ F^{\alpha}_{abc} = \begin{pmatrix} -\lambda^2 & \frac{1}{2} \left(i \sqrt{1 - 3 \lambda^2} - \lambda^2 \right) & -\lambda^2 \\ \frac{1}{2} \left(i \sqrt{1 - 3 \lambda^2} - \lambda^2 \right) & \frac{\lambda^2}{\lambda^2} & \frac{1}{2} \left(i \sqrt{1 - 3 \lambda^2} - \lambda^2 \right) \end{pmatrix} \\ - \ F^{\alpha \xi}_{\alpha \xi, \alpha^2 \xi}, F^{\alpha \xi}_{\alpha^2 \xi, \alpha \xi} & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \\ - \ F^{\delta}_{abc} = \begin{pmatrix} -\lambda^2 & \frac{1}{2} \left(\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \\ \frac{1}{2} \left(\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \end{pmatrix} \\ - \ F^{\xi}_{\alpha \xi, \alpha \xi, \alpha^2 \xi}, F^{\alpha \xi}_{\alpha^2 \xi, \alpha \xi} & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \\ - \ F^{\delta}_{abc} = \begin{pmatrix} -\lambda^2 & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \\ \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \\ \lambda^2 & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \\ - \ F^{\delta}_{abc} = \begin{pmatrix} -\lambda^2 & \frac{1}{2} \left(\lambda^2 + i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \\ \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \\ \lambda^2 & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) \end{pmatrix} \\ - \ F^{\alpha \xi}_{\alpha \xi, \alpha^2 \xi}, F^{\alpha \xi}_{\alpha \xi, \alpha \xi} & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \\ \lambda^2 & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \\ - \ F^{\alpha \xi}_{\alpha \xi, \alpha^2 \xi}, F^{\alpha \xi}_{\alpha \xi, \alpha^2 \xi} & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) \\ - \ F^{\alpha \xi}_{\alpha \xi, \alpha^2 \xi}, F^{\alpha \xi}_{\alpha^2 \xi, \alpha^2 \xi} & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3 \lambda^2} \right) & \lambda^2 \\ \lambda^2 & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 -$$

 $\bullet \ F^d_{abc} = \left(\begin{array}{ccc} \lambda^2 & -\lambda^2 & \frac{1}{2} \left(-\lambda^2 - i \sqrt{1 - 3\lambda^2} \right) \\ \lambda^2 & \frac{1}{2} \left(\lambda^2 + i \sqrt{1 - 3\lambda^2} \right) & \lambda^2 \\ \frac{1}{2} \left(\lambda^2 + i \sqrt{1 - 3\lambda^2} \right) & \lambda^2 & -\lambda^2 \end{array} \right)$

$$\begin{split} & - F_{\alpha\xi,\xi,\alpha^2\xi}^{\alpha\xi}, F_{\alpha^2\xi,\alpha\zeta,\alpha\xi}^{\xi} \\ & \bullet F_{abc}^{d} = \begin{pmatrix} \frac{1}{2} \left(i \sqrt{1 - 3\lambda^2} - \lambda^2 \right) & \lambda^2 & \frac{1}{2} \left(\lambda^2 - i \sqrt{1 - 3\lambda^2} \right) \\ & \lambda^2 & \frac{1}{2} \left(i \sqrt{1 - 3\lambda^2} - \lambda^2 \right) & \frac{1}{2} \left(\lambda^2 - i \sqrt{1 - 3\lambda^2} \right) \end{pmatrix} \\ & - F_{\alpha\xi,\xi,\alpha\xi}^{\alpha\xi}, F_{\alpha\xi,\alpha\xi,\alpha\xi}^{\xi} \\ & \bullet F_{abc}^{d} = \begin{pmatrix} \frac{1}{2} \left(\lambda^2 + i \sqrt{1 - 3\lambda^2} \right) & -\lambda^2 \\ \frac{1}{2} \left(\lambda^2 + i \sqrt{1 - 3\lambda^2} \right) & \lambda^2 & \frac{1}{2} \left(\lambda^2 - i \sqrt{1 - 3\lambda^2} \right) \end{pmatrix} \\ & - F_{\alpha\xi,\xi,\alpha\xi}^{\xi} \\ & \bullet F_{abc}^{d} = \begin{pmatrix} \lambda^2 & \frac{1}{2} \left(\lambda^2 - i \sqrt{1 - 3\lambda^2} \right) & \lambda^2 \\ \frac{1}{2} \left(i \sqrt{1 - 3\lambda^2} - \lambda^2 \right) & \lambda^2 & -\lambda^2 \end{pmatrix} \\ & - F_{\alpha\beta,\alpha\xi,\alpha\xi}^{\alpha\xi}, F_{\alpha\xi,\alpha\xi,\xi}^{\alpha\xi}, F_{\alpha\xi,\alpha\xi,\xi}$$

$$\begin{split} & - F_{\xi,\alpha\xi,\alpha}^{\alpha\xi}, F_{\alpha\xi,\alpha\xi,\xi}^{cq}, \\ \bullet F_{abc}^{d} = \begin{pmatrix} \frac{1}{2} \left(-\lambda^2 - i\sqrt{1-3\lambda^2} \right) & \lambda^2 & \frac{1}{2} \left(-\lambda^2 - i\sqrt{1-3\lambda^2} \right) \\ & -\lambda^2 & \frac{1}{2} \left(\lambda^2 + i\sqrt{1-3\lambda^2} \right) & \frac{1}{2} \left(-\lambda^2 - i\sqrt{1-3\lambda^2} \right) \end{pmatrix} \\ & - F_{\xi,\alpha\xi,\alpha\xi}^{a\xi}, F_{\alpha\xi,\alpha\xi,\xi}^{cq\xi} \\ \bullet F_{abc}^{d} = \begin{pmatrix} \frac{1}{2} \left(\lambda^2 - i\sqrt{1-3\lambda^2} \right) & -\lambda^2 & \lambda^2 \\ -\lambda^2 & \lambda^2 & \frac{1}{2} \left(i\sqrt{1-3\lambda^2} - \lambda^2 \right) \end{pmatrix} \\ & - F_{\xi,\alpha\xi,\xi}^{a\xi} \\ \bullet F_{abc}^{d} = \begin{pmatrix} \frac{1}{2} \left(\lambda^2 - i\sqrt{1-3\lambda^2} \right) & -\lambda^2 & \lambda^2 \\ \lambda^2 & \frac{1}{2} \left(i\sqrt{1-3\lambda^2} - \lambda^2 \right) \end{pmatrix} \\ & - F_{\xi,\alpha\xi,\xi}^{a\xi} \\ \bullet F_{abc}^{d} = \begin{pmatrix} \frac{1}{2} \left(\lambda^2 - i\sqrt{1-3\lambda^2} \right) & -\lambda^2 & \lambda^2 \\ \lambda^2 & \frac{1}{2} \left(i\sqrt{1-3\lambda^2} - \lambda^2 \right) & -\lambda^2 \end{pmatrix} \\ & - F_{abc}^{a\xi} = \begin{pmatrix} \frac{1}{2} \left(-\lambda^2 - i\sqrt{1-3\lambda^2} \right) & -\lambda^2 & \lambda^2 \\ \frac{1}{2} \left(\lambda^2 + i\sqrt{1-3\lambda^2} \right) & \lambda^2 & \lambda^2 \\ -\lambda^2 & \frac{1}{2} \left(-\lambda^2 - i\sqrt{1-3\lambda^2} \right) \end{pmatrix} \\ & - F_{\xi,\xi,\alpha^2\xi}^{\xi}, F_{\xi,\alpha^2\xi,\alpha^2\xi}^{\xi}, F_{\xi^2\xi,\xi,\xi}^{\xi}, F_{\alpha^2\xi,\alpha\xi,\xi}^{\alpha^2\xi} \\ \bullet F_{abc}^{d} = \begin{pmatrix} \frac{1}{2} \left(-\lambda^2 - i\sqrt{1-3\lambda^2} \right) & -\lambda^2 & \frac{1}{2} \left(-\lambda^2 - i\sqrt{1-3\lambda^2} \right) \\ \lambda^2 & \frac{1}{2} \left(\lambda^2 + i\sqrt{1-3\lambda^2} \right) & \frac{\lambda^2}{\lambda^2} \end{pmatrix} \\ & - F_{abc}^{\alpha^2\xi}, F_{\xi,\alpha^2\xi,\xi}^{\xi}, F_{\alpha^2\xi,\xi,\xi}^{\xi}, F_{\alpha^2\xi,\alpha^2\xi,\alpha^2\xi}^{\xi} \\ \bullet F_{abc}^{d} = \begin{pmatrix} \frac{1}{2} \left(-\lambda^2 - i\sqrt{1-3\lambda^2} \right) & -\lambda^2 & \frac{1}{2} \left(i\sqrt{1-3\lambda^2} - \lambda^2 \right) \\ \frac{1}{2} \left(\lambda^2 - i\sqrt{1-3\lambda^2} \right) & -\lambda^2 & \frac{1}{2} \left(i\sqrt{1-3\lambda^2} - \lambda^2 \right) \end{pmatrix} \\ & - F_{\xi,\xi,\alpha\xi}^{\xi}, F_{\alpha\xi,\xi,\xi}^{\xi} \\ \bullet F_{abc}^{d} = \begin{pmatrix} \lambda^2 & \lambda^2 & \lambda^2 & \frac{1}{2} \left(i\sqrt{1-3\lambda^2} - \lambda^2 \right) \\ \frac{1}{2} \left(i\sqrt{1-3\lambda^2} - \lambda^2 \right) & -\lambda^2 & \frac{1}{2} \left(i\sqrt{1-3\lambda^2} - \lambda^2 \right) \end{pmatrix} \\ & - F_{\xi,\xi,\alpha\xi}^{\alpha\xi}, F_{\xi,\alpha\xi,\xi}^{\xi}, F_{\alpha\xi,\xi,\alpha\xi}^{\xi\xi}, F_{\alpha^2\xi,\alpha\xi}^{\xi}, F_{\alpha\xi,\alpha\xi,\alpha\xi}^{\xi}, F_{\alpha\xi,\alpha\xi,\xi}^{\xi\xi}, F_{\alpha\xi,\alpha\xi,\xi}^{\xi\xi}, F_{\alpha\xi,\alpha\xi,\xi}^{\xi\xi}, F_{\alpha\xi,\alpha\xi,\xi}^{\xi\xi}, F_{\alpha\xi,\alpha\xi,\xi}^{\xi\xi}, F_{\alpha\xi,\xi,\alpha\xi,\xi}^{\xi\xi}, F_{\alpha\xi,\xi,\alpha\xi,\xi}^{\xi\xi}, F_{\alpha\xi,\xi,\xi,\xi}^{\xi\xi}, F_{\alpha\xi,\xi,\xi}^{\xi\xi}, F_{\alpha\xi,\xi,\xi,\xi}^{\xi\xi}, F$$

 $- F_{\xi,\xi,\xi}^{\alpha\xi}, F_{\xi,\alpha\xi,\xi}^{\xi}$

• $F_{abc}^d = \begin{pmatrix} -1 \end{pmatrix}$

 $-F_{\alpha,\xi,\alpha^{2}}^{2\xi}, F_{\alpha,\xi,\alpha\xi}^{\xi}, F_{\alpha,\xi,\alpha^{2}\xi}^{\xi}, F_{\alpha,\xi,\alpha^{2}\xi}^{\alpha\xi}, F_{\alpha,\xi,\alpha^{2}\xi}^{\alpha\xi}, F_{\alpha,\alpha,\alpha,\alpha}^{\alpha\xi}, F_{\alpha,\alpha,\xi,\alpha}^{\xi}, F_{\alpha,\alpha,\xi,\alpha^{2}}^{\alpha\xi}, F_{\alpha,\alpha,\alpha,\xi}^{\alpha\xi}, F_{\alpha,\alpha,\alpha,\xi$

• $F_{abc}^d = (1)$

$$\begin{split} &- F_{1,1,1}^{1}, F_{1,1,\alpha}^{\alpha}, F_{1,1,\alpha^{2}}^{\alpha^{2}}, F_{1,1,\xi}^{\xi}, F_{1,1,\alpha\xi}^{\alpha\xi}, F_{1,1,\alpha^{2}\xi}^{\alpha^{2}\xi}, F_{1,\alpha,1}^{\alpha}, F_{1,\alpha,\alpha}^{\alpha^{2}}, F_{1,\alpha,\alpha\xi}^{1}, F_{1,\alpha,\alpha\xi}^{1}, \\ &F_{1,\alpha,\xi}^{\alpha\xi}, F_{1,\alpha,\alpha\xi}^{\alpha\xi}, F_{1,\alpha,\alpha\xi}^{\xi}, F_{1,\alpha,\alpha\xi}^{\xi}, F_{1,\alpha^{2},1}^{2}, F_{1,\alpha}^{1}, F_{1,\alpha}^{\alpha^{2}}, F_{1,\alpha\xi}^{\alpha^{2}}, F_{1,\alpha\xi,\xi}^{\xi}, F_{1,\alpha\xi,\xi}^{\xi}, \\ &F_{1,\alpha^{2},\alpha^{2}\xi}^{\xi}, F_{1,\xi,1}^{\xi}, F_{1,\xi,\alpha}^{\alpha^{2}\xi}, F_{1,\xi,\alpha^{2}}^{\alpha\xi}, F_{1,\xi,\xi}^{\alpha\xi}, F_{1,\xi,\xi}^{\xi}, F_{1,\xi,\xi}^{\xi}, F_{1,\xi,\xi}^{\alpha\xi}, F_{1,\xi,\xi}^{\alpha\xi}, F_{1,\xi,\alpha\xi}^{\alpha\xi}, \\ &F_{1,\alpha,\alpha\xi}^{\xi}, F_{1,\xi,\alpha\xi}^{\alpha\xi}, F_{1,\xi,\alpha\xi}^{\alpha\xi}, F_{1,\xi,\alpha\xi}^{\alpha\xi}, F_{1,\xi,\alpha\xi}^{\xi}, F_{1,\xi,\xi}^{\xi}, F_{1,\xi,\xi}^{\xi}, F_{1,\xi,\xi}^{\xi}, F_{1,\xi,\xi}^{\xi}, F_{1,\xi,\xi,\xi}^{\xi}, F_{1,\xi,\xi,\xi}^{\xi$$

 $F^{\xi}_{\alpha^2,\xi,\xi},F^{\alpha\xi}_{\alpha^2,\xi,\xi},F^{\alpha^2\xi}_{\alpha^2,\xi,\xi},F^{\alpha}_{\alpha^2,\xi,\alpha\xi},F^{\xi}_{\alpha^2,\xi,\alpha\xi},F^{\alpha\xi}_{\alpha^2,\xi,\alpha\xi},F^{\alpha^2\xi}_{\alpha^2,\xi,\alpha\xi},F^1_{\alpha^2,\xi,\alpha^2\xi},$ $F_{\alpha^2,\xi,\alpha^2\xi}^{\xi}, F_{\alpha^2,\xi,\alpha^2\xi}^{\alpha\xi}, F_{\alpha^2,\xi,\alpha^2\xi}^{\alpha\xi}, F_{\alpha^2,\alpha\xi,1}^{\xi}, F_{\alpha^2,\alpha\xi,\alpha}^{\alpha\xi}, F_{\alpha^2,\alpha\xi,\xi}^{1}, F_{\alpha^2,\alpha\xi,\alpha}^{\xi}, F_{\alpha^2,\alpha\xi,\xi}^{1}, F_{\alpha^2,\alpha\xi,\xi}^{\xi}, F_{\alpha^2,\alpha\xi,\xi}^{\xi}, F_{\alpha^2,\alpha\xi,\xi}^{\alpha\xi}, F_{\alpha^2,\alpha\xi,\xi}^{\alpha\xi}, F_{\alpha^2,\alpha\xi,\alpha\xi}^{\alpha\xi}, F_{\alpha^2,\alpha\xi}^{\alpha\xi}, F_{\alpha^2,\alpha\xi}^{\alpha\xi}, F_{\alpha^2,\alpha\xi}^{\alpha\xi}, F_{\alpha^2$ $F^{\alpha}_{\alpha^{2},\alpha^{2}\xi,\xi},F^{\xi}_{\alpha^{2},\alpha^{2}\xi,\xi},F^{\alpha\xi}_{\alpha^{2},\alpha^{2}\xi,\xi},F^{\alpha^{2}\xi}_{\alpha^{2},\alpha^{2}\xi,\xi},F^{1}_{\alpha^{2},\alpha^{2}\xi,\alpha\xi},F^{\alpha\xi}_{\alpha^{2},\alpha^{2}\xi,\alpha\xi},F^{\alpha^{2}\xi}_{\alpha^{2},\alpha^{2}\xi,\alpha\xi},F^{\alpha\xi}_{\alpha^{2},\alpha\xi},F^{\alpha\xi}_{\alpha^{2},\alpha\xi}$ $F_{\alpha^2,\alpha^2\xi,\alpha^2\xi}^{\alpha^2},F_{\xi,1,1}^{\xi},F_{\xi,1,\alpha}^{\alpha^2\xi},F_{\xi,1,\alpha^2}^{\alpha\xi},F_{\xi,1,\xi}^{1},F_{\xi,1,\xi}^{\xi},F_{\xi,1,\xi}^{\alpha\xi},F_{\xi,1,\alpha}^{\alpha^2\xi},F_{\xi,1,\alpha\xi}^{\alpha^2},F_{\xi,1,\alpha$ $F_{\xi,1,\alpha\xi}^{\xi}, F_{\xi,1,\alpha\xi}^{\alpha\xi}, F_{\xi,1,\alpha\xi}^{\alpha\xi}, F_{\xi,1,\alpha\xi}^{\alpha\xi}, F_{\xi,1,\alpha\xi}^{\xi}, F_{\xi,1,\alpha\xi}^{\alpha\xi}, F_{\xi,1,\alpha\xi}^{\alpha\xi}, F_{\xi,1,\alpha\xi}^{\alpha\xi}, F_{\xi,1,\alpha\xi}^{\alpha\xi}, F_{\xi,1,\alpha\xi}^{\alpha\xi}, F_{\xi,1,\alpha\xi}^{\alpha\xi}, F_{\xi,1,\alpha\xi}^{\alpha\xi}, F_{\xi,\alpha,\alpha\xi}^{\alpha\xi}, F_{\xi,\alpha,\alpha\xi}^{\xi}, F_{\xi,\alpha\xi}^{\xi}, F_{\xi,\alpha\xi}^{\xi$ $F^{1}_{\xi,\alpha^{2},\alpha\xi},F^{\xi}_{\xi,\alpha^{2},\alpha\xi},F^{\alpha\xi}_{\xi,\alpha^{2},\alpha\xi},F^{\xi}_{\xi,\alpha^{2},\alpha^{2}\xi},F^{1}_{\xi,\xi,1},F^{\xi}_{\xi,\xi,1},F^{\alpha\xi}_{\xi,\xi,1},F^{\alpha^{2}\xi}_{\xi,\xi,1},F^{\alpha}_{\xi,\xi,\alpha},$ $F_{\xi,\xi,\alpha}^{\xi},\ F_{\xi,\xi,\alpha}^{\alpha\xi},\ F_{\xi,\xi,\alpha}^{\alpha^{2}\xi},\ F_{\xi,\xi,\alpha^{2}}^{\alpha^{2}},\ F_{\xi,\xi,\alpha^{2}}^{\xi},\ F_{\xi,\xi,\alpha^{2}}^{\alpha\xi},\ F_{\xi,\xi,\alpha^{2}}^{\alpha\xi},\ F_{\xi,\xi,\alpha^{2}}^{1},\ F_{\xi,\xi,\xi}^{\alpha},$ $F_{\xi,\xi,\xi}^{\alpha^2},\ F_{\xi,\xi,\alpha\xi}^{1},\ F_{\xi,\xi,\alpha\xi}^{\alpha},\ F_{\xi,\xi,\alpha\xi}^{\alpha^2},\ F_{\xi,\xi,\alpha^2\xi}^{1},\ F_{\xi,\xi,\alpha^2\xi}^{\alpha},\ F_{\xi,\xi,\alpha^2\xi}^{\alpha^2},\ F_{\xi,\alpha\xi,1}^{\alpha^2},$ $F_{\xi,\alpha\xi,1}^{\xi},\ F_{\xi,\alpha\xi,1}^{\alpha\xi},\ F_{\xi,\alpha\xi,1}^{\alpha^2\xi},\ F_{\xi,\alpha\xi,\alpha}^{1},\ F_{\xi,\alpha\xi,\alpha}^{\xi},\ F_{\xi,\alpha\xi,\alpha}^{\alpha\xi},\ F_{\xi,\alpha\xi,\alpha}^{\alpha^2\xi},\ F_{\xi,\alpha\xi,\alpha}^{\alpha^2\xi},$ $F^{\xi}_{\xi,\alpha\xi,\alpha^2},F^{\alpha\xi}_{\xi,\alpha\xi,\alpha^2},F^{\alpha^2\xi}_{\xi,\alpha\xi,\alpha^2},F^1_{\xi,\alpha\xi,\xi},F^{\alpha}_{\xi,\alpha\xi,\xi},F^1_{\xi,\alpha\xi,\alpha\xi},F^{\alpha}_{\xi,\alpha\xi,\alpha\xi},F^{\alpha^2}_{\xi,\alpha\xi,\alpha\xi},$ $F^{1}_{\xi,\alpha\xi,\alpha^{2}\xi},\ F^{\alpha}_{\xi,\alpha\xi,\alpha^{2}\xi},\ F^{\alpha^{2}}_{\xi,\alpha\xi,\alpha^{2}\xi},\ F^{\alpha}_{\xi,\alpha^{2}\xi,1},\ F^{\xi}_{\xi,\alpha^{2}\xi,1},\ F^{\alpha\xi}_{\xi,\alpha^{2}\xi,1},\ F^{\alpha\xi}_{\xi,\alpha^{2}\xi,1},$ $F_{\xi,\alpha^2\xi,\alpha}^{\alpha^2}, F_{\xi,\alpha^2\xi,\alpha}^{\xi}, F_{\xi,\alpha^2\xi,\alpha}^{\alpha\xi}, F_{\xi,\alpha^2\xi,\alpha}^{\alpha\xi}, F_{\xi,\alpha^2\xi,\alpha^2}^{1}, F_{\xi,\alpha^2\xi,\alpha^2}^{\xi}, F_{\xi,\alpha^2\xi,\alpha^2}^{\xi}, F_{\xi,\alpha^2\xi,\alpha^2}^{\xi},$ $F^{\alpha^2\xi}_{\xi,\alpha^2\xi,\alpha^2},\,F^1_{\xi,\alpha^2\xi,\xi},\,F^{\alpha}_{\xi,\alpha^2\xi,\xi},\,F^1_{\xi,\alpha^2\xi,\alpha\xi},\,F^{\alpha}_{\xi,\alpha^2\xi,\alpha\xi},\,F^1_{\xi,\alpha^2\xi,\alpha^2\xi},\,F^{\alpha}_{\xi,\alpha^2\xi,\alpha^2\xi},$ $F^{\alpha\xi}_{\alpha\xi,1,1},\ F^{\xi}_{\alpha\xi,1,\alpha},\ F^{\alpha^{2}\xi}_{\alpha\xi,1,\alpha^{2}},\ F^{\alpha}_{\alpha\xi,1,\xi},\ F^{\xi}_{\alpha\xi,1,\xi},\ F^{\alpha\xi}_{\alpha\xi,1,\xi},\ F^{\alpha^{2}\xi}_{\alpha\xi,1,\xi},\ F^{1}_{\alpha\xi,1,\alpha\xi},$ $F^{\xi}_{\alpha\xi,1,\alpha\xi},\;F^{\alpha\xi}_{\alpha\xi,1,\alpha\xi},\;F^{\alpha^2\xi}_{\alpha\xi,1,\alpha\xi},\;F^{\alpha^2}_{\alpha\xi,1,\alpha^2\xi},\;F^{\xi}_{\alpha\xi,1,\alpha^2\xi},\;F^{\alpha\xi}_{\alpha\xi,1,\alpha^2\xi},\;F^{\alpha^2\xi}_{\alpha\xi,1,\alpha^2\xi},$ $F^{\xi}_{\alpha\xi,\alpha,1},F^{\alpha^2\xi}_{\alpha\xi,\alpha,\alpha},F^{\alpha\xi}_{\alpha\xi,\alpha,\alpha^2},F^{1}_{\alpha\xi,\alpha,\xi},F^{\xi}_{\alpha\xi,\alpha,\xi},F^{\alpha\xi}_{\alpha\xi,\alpha,\xi},F^{\xi}_{\alpha\xi,\alpha,\alpha\xi},F^{\alpha}_{\alpha\xi,\alpha,\alpha^2\xi},$ $\begin{aligned} & F_{\alpha\xi,\alpha,1}^{\alpha}, F_{\alpha\xi,\alpha,\alpha}^{\alpha}, F_{\alpha\xi,\alpha,\alpha^{2}}^{\alpha\xi}, F_{\alpha\xi,\alpha,\xi}^{1}, F_{\alpha\xi,\alpha,\xi}^{\alpha\xi}, F_{\alpha\xi,\alpha,\alpha\xi}^{\alpha\xi}, F_{\alpha\xi,\alpha,\alpha\xi}^{\alpha\xi}, F_{\alpha\xi,\alpha,\alpha\xi}^{\alpha\xi}, F_{\alpha\xi,\alpha,\alpha\xi}^{\alpha\xi}, F_{\alpha\xi,\alpha,\alpha\xi}^{\xi\xi}, F_{\alpha\xi,\alpha,\alpha\xi}^{\xi\xi}, F_{\alpha\xi,\alpha,\alpha^{2}\xi}^{\xi\xi}, F_{\alpha\xi,\alpha,\alpha^{2}\xi}^{\xi\xi}, F_{\alpha\xi,\alpha,\alpha^{2}\xi}^{\xi\xi}, F_{\alpha\xi,\alpha^{2},\alpha}^{\xi\xi}, F_{\alpha\xi,\alpha^{2},\alpha}^{\xi\xi}, F_{\alpha\xi,\alpha^{2},\alpha\xi}^{\xi\xi}, F_{\alpha\xi,\xi,\alpha}^{\xi\xi}, F_{\alpha\xi,\xi,\alpha}^{\xi\xi}, F_{\alpha\xi,\xi,\alpha}^{\xi\xi}, F_{\alpha\xi,\xi,\alpha}^{\xi\xi}, F_{\alpha\xi,\xi,\alpha\xi}^{\xi\xi}, F_{\alpha\xi,\alpha\xi,\alpha\xi}^{\xi\xi}, F_{\alpha\xi,\alpha\xi,\alpha\xi}$ $F_{\alpha^{2}\xi,1,1}^{\alpha^{2}\xi},F_{\alpha^{2}\xi,1,\alpha}^{\alpha\xi},F_{\alpha^{2}\xi,1,\alpha^{2}}^{\xi},F_{\alpha^{2}\xi,1,\xi}^{\alpha^{2}},F_{\alpha^{2}\xi,1,\xi}^{\xi},F_{\alpha^{2}\xi,1,\xi}^{\alpha\xi},F_{\alpha^{2}\xi,1,\xi}^{\alpha^{2}\xi},F_{\alpha^{2}\xi,1,\xi}^{\alpha},F_{\alpha^{2}\xi,1,\xi}^{\alpha\xi},F_{\alpha^{2}\xi,1,$ $F^{\xi}_{\alpha^2\xi,1,\alpha\xi},F^{\alpha\xi}_{\alpha^2\xi,1,\alpha\xi},F^{\alpha^2\xi}_{\alpha^2\xi,1,\alpha\xi},F^1_{\alpha^2\xi,1,\alpha^2\xi},F^{\xi}_{\alpha^2\xi,1,\alpha^2\xi},F^{\alpha\xi}_{\alpha^2\xi,1,\alpha^2\xi},F^{\alpha^2\xi}_{\alpha^2\xi,1,\alpha^2\xi},F^{\alpha\xi}_{\alpha^2\xi,1,\alpha^2\xi},F^{\alpha\xi}_{\alpha^2\xi,1,\alpha^2\xi},F^{\alpha\xi}_{\alpha^2\xi,1,\alpha\xi},$ $F^{\alpha\xi}_{\alpha^2\xi,\alpha,1},\ F^{\xi}_{\alpha^2\xi,\alpha,\alpha},\ F^{\alpha^2\xi}_{\alpha^2\xi,\alpha,\alpha^2},\ F^{\xi}_{\alpha^2\xi,\alpha,\xi},\ F^{\alpha\xi}_{\alpha^2\xi,\alpha,\xi},\ F^{1}_{\alpha^2\xi,\alpha,\alpha\xi},\ F^{\xi}_{\alpha^2\xi,\alpha,\alpha\xi},$
$$\begin{split} &F^{\alpha\xi}_{\alpha^2\xi,\alpha,\alpha\xi},F^{\xi}_{\alpha^2\xi,\alpha,\alpha^2\xi},F^{\alpha\xi}_{\alpha^2\xi,\alpha,\alpha^2\xi},F^{\alpha^2\xi}_{\alpha^2\xi,\alpha,\alpha^2\xi},F^{\xi}_{\alpha^2\xi,\alpha^2,1},F^{\alpha^2\xi}_{\alpha^2\xi,\alpha^2,\alpha},F^{\alpha\xi}_{\alpha^2\xi,\alpha^2,\alpha^2},\\ &F^1_{\alpha^2\xi,\alpha^2,\xi},F^{\xi}_{\alpha^2\xi,\alpha^2,\xi},F^{\alpha\xi}_{\alpha^2\xi,\alpha^2,\xi},F^{\alpha^2\xi}_{\alpha^2\xi,\alpha^2,\xi},F^{\xi}_{\alpha^2\xi,\alpha^2,\alpha\xi},F^{\xi}_{\alpha^2\xi,\alpha^2,\alpha\xi},F^{\xi}_{\alpha^2\xi,\alpha^2,\alpha^2\xi}, \end{split}$$

$$\begin{split} &F^{\alpha\xi}_{\alpha^2\xi,\alpha^2,\alpha^2\xi},\ F^{\alpha^2}_{\alpha^2\xi,\xi,1},\ F^{\xi}_{\alpha^2\xi,\xi,1},\ F^{\alpha\xi}_{\alpha^2\xi,\xi,1},\ F^{\alpha^2\xi}_{\alpha^2\xi,\xi,1},\ F^{1}_{\alpha^2\xi,\xi,\alpha},\ F^{\alpha^2\xi}_{\alpha^2\xi,\xi,\alpha},\\ &F^{\alpha}_{\alpha^2\xi,\xi,\alpha^2},\ F^{\xi}_{\alpha^2\xi,\xi,\alpha^2},\ F^{1}_{\alpha^2\xi,\xi,\xi},\ F^{\alpha}_{\alpha^2\xi,\xi,\xi},\ F^{\alpha}_{\alpha^2\xi,\xi,\xi},\ F^{2}_{\alpha^2\xi,\xi,\alpha\xi},\ F^{2}_{\alpha^2\xi,\alpha\xi,1},\ F^{\alpha\xi}_{\alpha^2\xi,\alpha\xi,1},\ F^{\alpha\xi}_{\alpha^2\xi,\alpha\xi,1},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha},\ F^{1}_{\alpha^2\xi,\alpha\xi,\alpha},\ F^{1}_{\alpha^2\xi,\alpha\xi,\alpha^2},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha^2},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha^2},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha^2},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha^2},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha^2},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha^2},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha^2},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha^2},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha^2},\ F^{2}_{\alpha^2\xi,\alpha\xi,\alpha^2},\ F^{2}_{\alpha^2\xi,\alpha^2\xi,\alpha},\ F^{2}_{\alpha^2\xi,\alpha^2\xi,\alpha},\ F^{2}_{\alpha^2\xi,\alpha^2\xi,\alpha^2},\ F^{2}_{\alpha^2\xi,\alpha^2\xi,\alpha^2\xi},\ F^{2}_{\alpha^2\xi,\alpha^2\xi,\alpha^2\xi},\ F^{2}_{\alpha^2\xi,\alpha^2\xi,\alpha^2\xi},\ F^{2}_{\alpha^2\xi,\alpha^2\xi,\alpha^2\xi},\ F^{2}_{\alpha^2\xi,\alpha^2\xi,\alpha^2\xi},\ F^{2}_{\alpha^2\xi,\alpha^2\xi,\alpha^2\xi},\ F^{2}_{\alpha^2\xi,\alpha^2\xi,\alpha^2\xi},\ F^{2}_{\alpha^2\xi,\alpha^2\xi},\ F^{2}_{\alpha^2\xi,\alpha^2\xi},\ F^{2}_{\alpha^2\xi,\alpha^2\xi},\ F^{2}_{\alpha^2\xi,\alpha^2\xi},$$

3 Pivotal Structures

There is 1 pivotal structures.

• $\epsilon_1 = 1$, $\epsilon_{\alpha} = 1$, $\epsilon_{\alpha^2} = 1$, $\epsilon_{\xi} = 1$, $\epsilon_{\alpha\xi} = 1$, and $\epsilon_{\alpha^2\xi} = 1$ which is spherical with quantum dimensions $q_1 = 1$, $q_{\alpha} = 1$, $q_{\alpha^2} = 1$, $q_{\xi} = \frac{2}{\sqrt{13}-3}$, $q_{\alpha\xi} = \frac{2}{\sqrt{13}-3}$, and $q_{\alpha^2\xi} = \frac{2}{\sqrt{13}-3}$.