$$\begin{aligned}\Psi_{33} &= C_1 \left(-|00dd\rangle - i\,|0dd0\rangle - i\,|d00d\rangle + |dd00\rangle\right) \\ &\quad + C_2 \left(-i\,|0d0d\rangle + |d0d0\rangle\right)\end{aligned} \tag{1}$$

$$C_1 = \frac{1}{4} + \frac{i}{4} \tag{2}$$

$$C_2 = \frac{-i}{2} \tag{3}$$