$$
\begin{aligned}
\Psi_{29} &= C_1\left(-|00du\rangle - |00ud\rangle + i\,|0du0\rangle + i\,|0ud0\rangle + i\,|d00u\rangle + |du00\rangle + i\,|u00d\rangle + |ud00\rangle\right) \\
&\quad + C_2\left(i\,|0d0u\rangle + i\,|0u0d\rangle + |d0u0\rangle + |u0d0\rangle\right)
\end{aligned}
$$

$$
C_1 = \frac{\frac{1}{4} - \frac{i}{4}}{\sqrt{2}}
$$

$$
C_2 = \frac{\frac{i}{2}}{\sqrt{2}}
$$