$$
\begin{aligned}
\Psi_{151} &= C_1 \left( |02dd\rangle - i\,|0dd2\rangle + |20dd\rangle - i\,|2dd0\rangle - i\,|d02d\rangle - i\,|d20d\rangle - |dd02\rangle - |dd20\rangle \right) \\
&\quad + C_2 \left( i\,|dddu\rangle - |ddud\rangle - i\,|dudd\rangle + |uddd\rangle \right)
\end{aligned}
$$

$$
C_1 = \frac{\left(\frac{1}{16} + \frac{i}{16}\right)\,\left(U - \sqrt{16\,t^2 + U^2}\right)}{t}
$$

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