The cross sections used in TRANSP are theoretical cross-sections called “Duane Jarme”. The original reference is

[1] DUANE, B.H., ''Fusion cross section theory'', in Annual Report on CTR Technology 1972 (WOLKENHAUER, W.C., Ed.), Rep. BNWL-1685, Battelle Pacific Northwest Laboratory, Richland, WA (1972).

This is also available in the NRL formulary:

(10) $n + Li^6 \longrightarrow He^4(2.1\,MeV) + T(2.7\,MeV)$

The total cross section in barns (1 barn $= 10^{-24}\,cm^2$) as a function of E, the energy in keV of the incident particle [the first ion on the left side of Eqs. (1)–(5)], assuming the target ion at rest, can be fitted by[28a]

$$\sigma_T(E) = \frac{A_5 + \left[(A_4 - A_3E)^2 + 1\right]^{-1} A_2}{E\left[\exp(A_1E^{-1/2}) - 1\right]}$$

where the Duane coefficients A_j for the principal fusion reactions are as follows:

	D–D (1a)	D–D (1b)	D–T (2)	D–He^3 (3)	T–T (4)	T–He^3 (5a–c)
A_1	46.097	47.88	45.95	89.27	38.39	123.1
A_2	372	482	50200	25900	448	11250
A_3	4.36×10^{-4}	3.08×10^{-4}	1.368×10^{-2}	3.98×10^{-3}	1.02×10^{-3}	0
A_4	1.220	1.177	1.076	1.297	2.09	0
A_5	0	0	409	647	0	0

The DD/DT cross-sections were upgraded to “Bosch-Hale”, but the TT cross-section was not.