Datasheet for the reaction
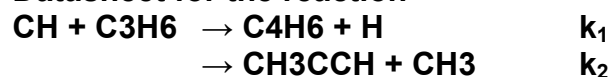**CH + C3H6 → C4H6 + H k_1**
**   → CH3CCH + CH3 k_2**

Author JC Loison (16 Sept. 2014)

Several measurements have been published in the literature at different temperatures down to 77K in some cases. The most recent one is from Trevitt et al. (2014, Journal of Physical Chemistry A, 117 (30), 6450-6457) for which they measured the branching ratios between the produced isomers of C4H6. In the absence of low-T measurements, we propose to adopt a mean value of the rate coefficients from Loison et al. (2009) and Trevitt et al. (2014, Journal of Physical Chemistry A, 117 (30), 6450-6457) for temperatures between 10 and 300 K. Note that at the time of this recommendation, the KIDA database does not include the different isomers of C4H6.

Preferred Values

$k_1(T = 10 – 300K)$ = 3.6×10^{-10} cm^3 molecule^{-1} s^{-1} *F_0 = 1.4,* g=10
$k_2(T = 10 – 300K)$ = 3.6×10^{-11} cm^3 molecule^{-1} s^{-1} *F_0 = 2,* g=10