IUPAC Task Group on Atmospheric Chemical Kinetic Data Evaluation – Data Sheet IV.A2.135 oClOx61

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$HO + HC(O)Cl \rightarrow H_2O + ClCO$

Rate coefficient data

k/cm^3 molecule^{-1} s^{-1}	Temp./K	Reference	Technique/ Comments
Relative Rate Coefficients			
$\leq 3.2 \times 10^{-13}$	299.2	Libuda et al., 1990	RR (a)

Comments

(a) HO radicals were generated by the thermal decomposition of HO_2NO_2 after addition of NO to HC(O)Cl-*n*-butane-HO_2NO_2-O_2-N_2 mixtures at 800 mbar pressure. The concentrations of HC(O)Cl and *n*-butane were monitored by FTIR spectroscopy and GC, respectively. No decay of HC(O)Cl was observed, leading to the upper limit to the rate coefficient cited in the table.

Preferred Values

Parameter	Value	T/K
k /cm^3 molecule^{-1} s^{-1}	$< 5 \times 10^{-13}$	298

Comments on Preferred Values

The preferred value is based on the upper limit to the rate coefficient reported by Libuda et al. (1990).

References

Libuda, H. G., Zabel, F., Fink, E. H. and Becker, K. H.: J. Phys. Chem., 94, 5860, 1990.