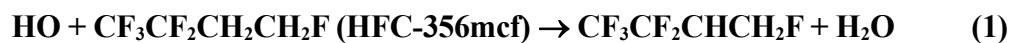


IUPAC Task Group on Atmospheric Chemical Kinetic Data Evaluation - Data Sheet of FOx78; VII.A1.7

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The citation for the preferred values in this data sheet is: IUPAC Task Group on Atmospheric Chemical Kinetic Data Evaluation, <http://iupac.pole-ether.fr>.

This datasheet last evaluated: June 2015; last change in preferred values: June 2009.



Rate coefficient data ($k = k_1 + k_2$)

$k/\text{cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$	T/K	Reference	Technique/ Comments
<i>Absolute Rate Coefficients</i>			
$1.74 \times 10^{-12} \exp[-(1108 \pm 120)/T]$	252-366	Nelson et al. (1995)	DF-LIF (a)
$(4.05 \pm 0.23) \times 10^{-14}$	295		

Comments

- (a) HO radicals were produced by the reaction of H atoms with NO₂. Experiments were performed in 1.5-3.0 Torr (2-4 mbar) of helium diluent.

Preferred Values

Parameter	Value	T/K
k	$4.2 \times 10^{-14} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$	298
k	$1.7 \times 10^{-12} \exp(-1108/T) \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$	250-370
<i>Reliability</i>		
$\Delta \log k$	0.15	298
$\Delta E/R$	± 300	250-370

Comments on Preferred Values

The recommendation is based on the results from the study by Nelson et al. (1995).

References

Nelson Jr., D.D., Zahniser, M.S, Kolb, C.E, and Magid, H.: J. Phys. Chem., 99 16301, 1995.

