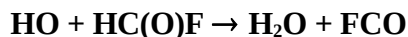


Task Group on Atmospheric Chemical Kinetic Data Evaluation – Data Sheet of FOx28

Website: <http://iupac.pole-ether.fr>. See website for latest evaluated data. Data sheets can be downloaded for personal use only and must not be retransmitted or disseminated either electronically or in hardcopy without explicit written permission. This data sheet updated: 29th March 2005.



$$\Delta H^\circ = -56.2 \text{ kJ mol}^{-1}$$

Rate coefficient data

$k/\text{cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$	Temp./K	Reference	Technique/ Comments
<i>Relative Rate Coefficients</i>			
$< 5.0 \times 10^{-15}$	296 ± 2	Wallington and Hurley, 1993	RR (a)

Comments

- (a) HO radicals were generated from the photolysis of O₃-H₂-O₂ mixtures, and HC(O)F was formed *in situ* from the oxidation of CH₃F. No losses of HC(O)F were observed, leading to a rate coefficient ratio of $k(\text{HO} + \text{HC(O)F})/k(\text{HO} + \text{CH}_3\text{F}) < 0.25$. This upper limit to the rate coefficient ratio is placed on an absolute basis by use of $k(\text{HO} + \text{CH}_3\text{F}) = 2.0 \times 10^{-14} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$ (IUPAC, current recommendation).

Preferred Values

$$k < 1.0 \times 10^{-14} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1} \text{ at } 298 \text{ K.}$$

Comments on Preferred Values

The preferred value is derived from the sole study of Wallington and Hurley (1993), with the higher upper limit reflecting uncertainties in the reference reaction rate coefficient.

References

IUPAC: <http://iupac.pole-ether.fr>, 2004.

Wallington, T. J. and Hurley, M. D.: Environ. Sci. Technol. 27, 1448, 1993.