IUPAC Task Group on Atmospheric Chemical Kinetic Data Evaluation – Data Sheet SOx54

This data sheet updated: 20th November 2001.

$CH_2SH + NO \rightarrow$ products

Rate coefficient data

k/cm^3 molecule^{-1} s^{-1}	Temp./K	Reference	Technique/ Comments
Absolute Rate Coefficients			
$(1.5 \pm 0.2) \times 10^{-11}$	298	Anastasi et al., 1992	(a)

Comments

(a) Pulsed radiolysis of CH_3SH-O_2-SF_6 mixtures at 1 bar total pressure. CH_2SH and CH_3S radicals were generated by reactions of the radiolytically produced F atoms with CH_3SH, and [CH_2SH] was monitored by UV absorption over the wavelength range 220-380 nm.

Preferred Values

$k = 1.5 \times 10^{-11}$ cm^3 molecule^{-1} s^{-1} at 298 K.

Reliability

$\Delta \log k = \pm 0.3$ at 298 K.

Comments on Preferred Values

The only available determination (Anastasi et al., 1992) of k is accepted, but with substantial error limits until confirmatory studies are made.

References

Anastasi, C., Broomfield, M., Nielsen, O. J. and Pagsberg, P.: J. Phys. Chem. 96, 696, 1992.