

IUPAC Task Group on Atmospheric Chemical Kinetic Data Evaluation – Data Sheet SO_x54

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This data sheet updated: 20th November 2001.

CH₂SH + NO → products

Rate coefficient data

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

Comments

- (a) Pulsed radiolysis of CH₃SH-O₂-SF₆ mixtures at 1 bar total pressure. CH₂SH and CH₃S radicals were generated by reactions of the radiolytically produced F atoms with CH₃SH, and [CH₂SH] was monitored by UV absorption over the wavelength range 220-380 nm.

Preferred Values

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