

IUPAC Task Group on Atmospheric Chemical Kinetic Data Evaluation – Data Sheet SOx53

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This data sheet updated: 20th November 2001.

CH₂SH + O₃ → products

Rate coefficient data

<i>k</i> /cm ³ molecule ⁻¹ s ⁻¹	Temp./K	Reference	Technique/ Comments
<i>Absolute Rate Coefficients</i> (3.5 ± 1.2) × 10 ⁻¹¹	298	Rahman et al., 1992	(a)

Comments

- (a) Fast-flow discharge study. CH₂SH radicals were generated by the reaction of F atoms with CH₃SH, and monitored by MS. Source reactions were simulated to check consumption of F atoms. The total pressure was 3 mbar.

Preferred Values

$k = 3.5 \times 10^{-11} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$ at 298 K.

Reliability

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

Comments on Preferred Values

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

References

Rahman, M. M., Becker, E., Wille, U. and Schindler, R. N.: Ber. Bunsenges. Phys. Chem. 96, 783, 1992.