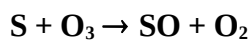


IUPAC Task Group on Atmospheric Chemical Kinetic Data Evaluation – Data Sheet SOx8

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: 19th November 2001.



$$\Delta H^\circ = -415 \text{ kJ}\cdot\text{mol}^{-1}$$

Rate coefficient data

$k/\text{cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$	Temp./K	Reference	Technique/ Comments
<i>Absolute Rate Coefficients</i> $(1.2 \pm 0.3) \times 10^{-11}$	298	Clyne and Townsend, 1975 ¹	DF-RF

Preferred Values

$$k = 1.2 \times 10^{-11} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1} \text{ at } 298 \text{ K.}$$

Reliability

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

Comments on Preferred Values

The only available experimental determination¹ is accepted as the preferred value. The method was direct, and in the same study a number of other rate coefficients for S atom reactions were measured giving results in good agreement with other techniques.

References

¹ M. A. A. Clyne and L. W. Townsend, Int. J. Chem. Kinet., Symp. 1, 73 (1975).