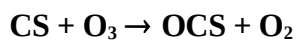


## IUPAC Task Group on Atmospheric Chemical Kinetic Data Evaluation – Data Sheet SOx50

Website: <http://iupac-kinetic.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: 20<sup>th</sup> November 2001.



$$\Delta H^\circ(1) = -557 \text{ kJ}\cdot\text{mol}^{-1}$$

### Rate coefficient data

$k/\text{cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$	Temp./K	Reference	Technique/ Comments
<i>Absolute Rate Coefficients</i> ( $3.0 \pm 0.4$ ) $\times 10^{-16}$	298	Black et al., 1983	(a)

### Comments

- (a) CS radicals were produced by pulsed laser photolysis of CS<sub>2</sub> at 193 nm, with He as the buffer gas at a total pressure of 67-400 mbar (50-300 Torr). CS radicals were monitored by LIF at 257.7 nm.

### Preferred Values

$$k = 3.0 \times 10^{-16} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1} \text{ at } 298 \text{ K.}$$

#### Reliability

$$\Delta \log k = \pm 0.5 \text{ at } 298 \text{ K.}$$

#### Comments on Preferred Values

The only available measurement of the rate coefficient  $k$  is that of Black et al. (1983). Their value is accepted, with substantial error limits.

### References

Black, G., Jusinski, L. E. and Slanger, T. G.: Chem. Phys. Lett. 102, 64, 1983.