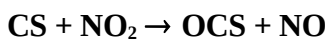


# IUPAC Task Group on Atmospheric chemical Kinetic Data Evaluation – Data Sheet SOx51

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: 20<sup>th</sup> November 2001.



$$\Delta H^\circ(1) = -357 \text{ kJ}\cdot\text{mol}^{-1}$$

## Rate coefficient data

$k/\text{cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$	Temp./K	Reference	Technique/ Comments
<i>Absolute Rate Coefficients</i> $(7.6 \pm 1.1) \times 10^{-17}$	298	Black et al., 1983	(a)

## Comments

- (a) CS radicals were produced by pulsed laser photolysis of CS<sub>2</sub> at 193 nm and monitored by LIF at 257.7 nm. He [32 mbar (24 Torr) total pressure] was used as the buffer gas.

## Preferred Values

$$k = 7.6 \times 10^{-17} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1} \text{ at } 298 \text{ K.}$$

### Reliability

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

### Comments on Preferred Values

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

## References

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