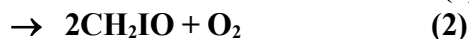


# IUPAC Task Group on Atmospheric Chemical Kinetic Data Evaluation – Data Sheet oIOx3

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: 3<sup>rd</sup> February 2004.



## Rate coefficient data ( $k = k_1 + k_2$ )

$k/\text{cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$	Temp./K	Reference	Technique/ Comments
<i>Absolute Rate Coefficients</i> $\sim 9 \times 10^{-11}$	295	Sehested, Ellermann, and Nielsen, 1994 <sup>1</sup>	(a)

## Comments

- (a) Pulse radiolysis UV absorption spectrometric study of  $\text{CH}_3\text{I}-\text{O}_2-\text{SF}_6$  mixtures at a total pressure of 1000 mbar.  $\text{CH}_2\text{IO}_2$  radicals were monitored by UV absorption with  $\sigma_{370} = (2.1 \pm 0.5) \times 10^{-18} \text{ cm}^2 \text{ molecule}^{-1}$ . The interpretation of the kinetic data is complicated by the presence of  $\text{CH}_3\text{O}_2$  radicals, which leads to mixed-order kinetics. The above approximate value of  $k$  was derived on the basis of several assumptions.

## Preferred Values

No recommendation.

### *Comments on Preferred Values*

The approximate and exceptionally large rate coefficient obtained by Sehested *et al.*<sup>1</sup> should be regarded with caution owing to the inherent complications in their experimental system. Until more work is carried out in this reaction, we make no recommendation.

## References

- <sup>1</sup> J. Sehested, T. Ellermann and O. J. Nielsen, *Int. J. Chem. Kinet.* **26**, 259 (1994).