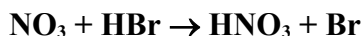


IUPAC Task Group on Atmospheric Chemical Kinetic Data Evaluation – Data Sheet iBrOx16

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 re-transmitted or disseminated either electronically or in hard copy without explicit written permission.

This data sheet updated: 3rd February 2004.



$$\Delta H^\circ = -60.6 \text{ kJ}\cdot\text{mol}^{-1}$$

Rate coefficient data

$k/\text{cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$	Temp./K	Reference	Technique/ Comments
<i>Absolute Rate Coefficients</i>			
$\leq 1 \times 10^{-16}$	298	Mellouki <i>et al.</i> , 1989 ¹	DF-EPR (a)
$(1.3 \pm 1.1) \times 10^{-16}$	298	Canosa-Mas <i>et al.</i> , 1989 ²	DF-A (b)

Comments

- (a) The rate coefficient was derived from fitting the measured data to a complex mechanism.
(b) Discharge flow system with multipath absorption of NO₃. The rate coefficient was derived from fitting the measured data to a complex mechanism.

Preferred Values

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

Comments on Preferred Values

The preferred value is the upper limit reported by Mellouki *et al.*¹ in a study using the discharge flow-EPR technique. Canosa-Mas *et al.*² reported a rate coefficient derived from fitting their data to a complex mechanism which, within the stated uncertainty limits, is consistent with the upper limit to the rate coefficient reported by Mellouki *et al.*¹

References

- ¹ A. Mellouki, G. Poulet, G. Le Bras, R. Singer, J. P. Burrows, and G. K. Moortgat, *J. Phys. Chem.* **93**, 8017 (1989).
² C. E. Canosa-Mas, S. J. Smith, S. Toby, and R. P. Wayne, *J. Chem. Soc. Faraday Trans. 2*, **85**, 709 (1989).