

Diffusion coefficient of acetonitrile in hexane

3 Diffusion in Liquid Mixtures

3.1. Data

3.1.1. Diffusion in Binary Mixtures

C ₂ H ₃ N	(1)	acetonitrile	75-05-8
C ₆ H ₁₄	(2)	hexane	110-54-3
Intradiffusion Coefficient: $D_{2T}(T)$; Method: DIA			Ref.: [1984E7]
T [K]	p [kPa]	$D \cdot 10^9$ [m ² /s]	
298.15	101.32	3.70 ± 1%	
Comment: values at trace concentration of ¹⁴ C labelled component (2)			
Intradiffusion Coefficient: $D_{1T}(T)$; Method: DIA			Ref.: [1982D4]
T [K]	p [MPa]	$D \cdot 10^9$ [m ² /s]	
298.2	0.101	6.10 ± 2%	
298.2	0.101	6.13 ± 2%	
298.2	39.1	4.503 ± 2%	
298.2	85.9	3.802 ± 2%	
298.2	102.2	3.114 ± 2%	
298.2	146.0	2.705 ± 2%	
298.2	218.8	2.073 ± 2%	
298.2	385.6	1.083 ± 4%	
Comment: ¹⁴ C-acetonitrile used as tracer			

Symbols and Abbreviations

Short Form	Full Form
D	diffusion coefficient
p	pressure
T	temperature
DIA	diaphragm cell

References

- [1982D4] Dymond, J. H., Woolf, L. A.: J. Chem. Soc., Faraday Trans. I **78** (1982) 991–1000.
 [1984E7] Eastal, A. J., Woolf, L. A.: J. Chem. Soc., Faraday Trans. I **80** (1984) 1287–1295.