

Diffusion coefficient of 1-heptanesulfonic acid sodium salt in dideuterium oxide

3 Diffusion in Liquid Mixtures

3.1. Data

3.1.1. Diffusion in Binary Mixtures

C ₇ H ₁₆ O ₃ SNa	(1)	1-heptanesulfonic acid sodium salt	22767-50-6
D ₂ O	(2)	dideuterium oxide	7789-20-0
Intradiffusion Coefficient: $D_{1T}(m_i)$; $T = 298.15 \pm 0.1$ K; Method: NMR PG			Ref.: [1999A11]
m_1 [mol/kg]	p [kPa]	$D \cdot 10^9$ [m ² /s]	
0.1371	101.32	0.517	
0.1946	101.32	0.500	
0.2348	101.32	0.492	
0.2853	101.32	0.482	
0.3329	101.32	0.427	
0.3637	101.32	0.392	
0.4175	101.32	0.366	
0.4262	101.32	0.333	
0.4543	101.32	0.329	
0.5088	101.32	0.285	
0.5525	101.32	0.263	
0.5679	101.32	0.270	
0.6565	101.32	0.221	
0.7321	101.32	0.211	
0.7493	101.32	0.182	
0.8376	101.32	0.167	
0.8782	101.32	0.165	
0.9916	101.32	0.140	
1.1962	101.32	0.103	
1.5450	101.32	0.0731	
2.0220	101.32	0.0539	
2.5450	101.32	0.0462	

Symbols and Abbreviations

Short Form	Full Form
D	diffusion coefficient
p	pressure
T	temperature
m_i	molality
NMR PG	NMR spin echo pulse gradient

References

- [1999A11] Annunziata O., Costantino, L., D'Errico, G., Paduano, L., Vitagliano, V.: J. Colloid Interface Sci. **216** (1999) 16–24.