

Diffusion coefficient of 1,4-dimethyl-benzene in heptan-1-ol

3 Diffusion in Liquid Mixtures

3.1. Data

3.1.1. Diffusion in Binary Mixtures

C ₈ H ₁₀	(1)	1,4-dimethyl-benzene	106-42-3
C ₇ H ₁₆ O	(2)	heptan-1-ol	111-70-6
Mutual Diffusion Coefficient: $D_{12}(x_i)$; $T = 301.15 \pm 0.05$ K; Method: DIA			Ref.: [1990R1]
x_1	p [kPa]	$D \cdot 10^9$ [m ² /s]	
0.0000	101.32	0.582	
0.2363	101.32	0.528	
0.4263	101.32	0.400	
0.6364	101.32	0.469	
0.8161	101.32	0.850	
Comment: xylene is mixture of p-, m-, and o-xylene; max. error: $\pm 14\%$			

Symbols and Abbreviations

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

References

[1990R1] Ramprasad, G., Das, T. R., Mukherjee, A. K.: J. Chem. Eng. Jpn. **23** (1990) 444–446.