

Diffusion coefficient of decane in tetradecane

3 Diffusion in Liquid Mixtures

3.1. Data

3.1.1. Diffusion in Binary Mixtures

C ₁₀ H ₂₂	(1)	decane	124-18-5
C ₁₄ H ₃₀	(2)	tetradecane	629-59-4
Mutual Diffusion Coefficient: $D_{12}(w_i)$; $T = 298.15$ K; Method: OEC			Ref.: [2008B3]
w_1	p [kPa]	$D \cdot 10^9$ [m ² /s]	
0.50	101.32	0.90 ± 0.22	
0.50*	101.32	0.89 ± 0.24	
Comment: *: measured by FRS			
Mutual Diffusion Coefficient: $D_{12}(w_i)$; $T = 298.15$ K; Method: OEC			Ref.: [2007L2]
w_1	p [kPa]	$D \cdot 10^9$ [m ² /s]	
0.50	101.32	0.90 ± 0.07	

Symbols and Abbreviations

Short Form	Full Form
D	diffusion coefficient
p	pressure
T	temperature
OEC	open ended capillary
FRS	forced Rayleigh scattering
w_i	mass fraction

References

- [2007L2] Leahy-Dios A., Firoozabadi, A.: J. Phys. Chem. B **111** (2007) 191–198.
 [2008B3] Blanco P., Polyakov, P., Bou-Ali, M. M., Wiegand, S.: J. Phys. Chem. B **112** (2008) 8340–8345.