

Diffusion coefficient of toluene in propan-2-ol

3 Diffusion in Liquid Mixtures

3.1. Data

3.1.1. Diffusion in Binary Mixtures

C ₇ H ₈	(1)	toluene	108-88-3
C ₃ H ₈ O	(2)	propan-2-ol	67-63-0
Intradiffusion Coefficient: $D_{1T}(T)$; Method: TAYLOR			Ref.: [1987S14]
T [K]	ρ_2 [kg/m ³]	$D \cdot 10^9$ [m ² /s]	
333.2	750	2.21 ± 2%	
373.2	708	4.74 ± 2%	
423.2	634	8.97 ± 2%	
473.2	527	17.7 ± 2%	
493.2	466	23.9 ± 2%	
508.3	569	19.7 ± 2%	
508.3	488	23.7 ± 2%	
521.0	549	22.2 ± 2%	
521.0	473	26.3 ± 2%	
521.0	437	30.8 ± 2%	
536.0	548	22.7 ± 2%	
536.0	504	26.3 ± 2%	
536.0	417	31.3 ± 2%	

Comment: tracer diffusivities along vapor–liquid coexistence curve, given liquid densities of propan-2-ol

Symbols and Abbreviations

Short Form	Full Form
D	diffusion coefficient
p	pressure
T	temperature
ρ	mass density
TAYLOR	Taylor dispersion technique

References

[1987S14] Sun, C. K. J., Chen, S. H.: Ind. Eng. Chem. Res. **26** (1987) 815–819.