

# Diffusion coefficient of 4-chloro-toluene into cyclohexane and heptane at infinite dilution

## 3 Diffusion in Liquid Mixtures

### 3.1. Data

#### 3.1.4. Diffusion in Ternary Mixtures at Infinite Dilution

C <sub>7</sub> H <sub>7</sub> Cl	(1)	4-chloro-toluene	106-43-4
C <sub>6</sub> H <sub>12</sub>	(2)	cyclohexane	110-82-7
C <sub>7</sub> H <sub>16</sub>	(3)	heptane	142-82-5
Diffusion coefficient at infinite dilution: $D^{\circ}_{1(23)}(x_i)$ ; Method: TAYLOR			Ref.: [2007S5]
$T = 298.15 \text{ K}; p = 101.325 \text{ kPa}$			
$x_2$	$x_1$	$D^{\circ}_{1(23)} \cdot 10^9 \text{ [m}^2/\text{s]}$	
0.0000		$3.11 \pm 3\%$	
0.1013		$3.00 \pm 3\%$	
0.2027		$2.84 \pm 3\%$	
0.4037		$2.51 \pm 3\%$	
0.4998		$2.32 \pm 3\%$	
0.6018		$2.10 \pm 3\%$	
0.8024		$1.68 \pm 3\%$	
0.9002		$1.50 \pm 3\%$	
1.0000		$1.28 \pm 3\%$	

### Symbols and Abbreviations

Short Form	Full Form
$x_i$	mole fraction
$D$	diffusion coefficient
$p$	pressure
$T$	temperature
TAYLOR	Taylor dispersion technique

### References

[2007S5] Safi A., Nicolas, C., Neau, E., Chevalier, J. L.: J. Chem. Eng. Data **52** (2007) 977–981.