Cyclohexane, 1,3-diethyl

Other names: 1,3-diethylcyclohexane
Inchi: InChI=1S/C10H20/c1-3-9-6-5-7-10(4-2)8-9/h9-10H,3-8H2,1-2H3
InchiKey: WJUNKQFLRQGJAR-UHFFFAOYSA-N
Formula: C10H20
SMILES: CCC1CCCC(CC)C1
Mol. weight [g/mol]: 140.27
CAS: 1678-99-5

Physical Properties

Property code	Value	Unit	Source
gf	50.06	kJ/mol	Joback Method
hf	-215.75	kJ/mol	Joback Method
hfus	14.56	kJ/mol	Joback Method
hvap	37.97	kJ/mol	Joback Method
log10ws	-3.42		Crippen Method
logp	3.613		Crippen Method
mcvol	140.900	ml/mol	McGowan Method
pc	2485.07	kPa	Joback Method
rinpol	1017.00		NIST Webbook
rinpol	1000.00		NIST Webbook
rinpol	1000.00		NIST Webbook
rinpol	1017.00		NIST Webbook
tb	447.20 ± 2.00	K	NIST Webbook
tb	445.70 ± 2.00	K	NIST Webbook
tc	639.52	K	Joback Method
tf	205.60	K	Joback Method
vc	0.527	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	299.73	J/mol×K	443.08	Joback Method
cpg	319.51	J/mol×K	475.82	Joback Method
cpg	338.41	J/mol×K	508.56	Joback Method

cpg	356.42	J/mol×K	541.30	Joback Method
cpg	373.57	J/mol×K	574.04	Joback Method
cpg	389.89	J/mol×K	606.78	Joback Method
cpg	405.38	J/mol×K	639.52	Joback Method
dvisc	0.0050164	Pa×s	205.60	Joback Method
dvisc	0.0020679	Pa×s	245.18	Joback Method
dvisc	0.0010906	Pa×s	284.76	Joback Method
dvisc	0.0006724	Pa×s	324.34	Joback Method
dvisc	0.0004605	Pa×s	363.92	Joback Method
dvisc	0.0003397	Pa×s	403.50	Joback Method
dvisc	0.0002646	Pa×s	443.08	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1678995&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method: https://en.wikipedia.org/wiki/Joback_method
McGowan Method: http://link.springer.com/article/10.1007/BF02311772

Legend

cpg: Ideal gas heat capacity
dvisc: Dynamic viscosity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions
hfus: Enthalpy of fusion at standard conditions
hvap: Enthalpy of vaporization at standard conditions
log10ws: Log10 of Water solubility in mol/l
logp: Octanol/Water partition coefficient
mcvol: McGowan's characteristic volume
pc: Critical Pressure
rinpol: Non-polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume