Cyclohexane, eicosyl-

Other names: Eicosane, 1-cyclohexyl-
1-Cyclohexyleicosane
n-Eicosylcyclohexane
Inchi: InChI=1S/C26H52/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-20-23-26-24-21-19-22
InchiKey: PSPNTGGVAYLSJO-UHFFFAOYSA-N
Formula: C26H52
SMILES: CCCCCCCCCCCCCCCCCCCCC1CCCCC1
Mol. weight [g/mol]: 364.69
CAS: 4443-55-4

Physical Properties

Property code	Value	Unit	Source
gf	192.49	kJ/mol	Joback Method
hf	-525.65	kJ/mol	Joback Method
hfus	54.93	kJ/mol	Joback Method
hvap	73.90	kJ/mol	Joback Method
log10ws	-10.36		Crippen Method
logp	9.998		Crippen Method
mcvol	366.340	ml/mol	McGowan Method
pc	812.14	kPa	Joback Method
tb	813.83	K	Joback Method
tc	999.07	K	Joback Method
tf	321.05 ± 0.50	K	NIST Webbook
tf	321.05 ± 1.50	K	NIST Webbook
vc	1.425	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1217.53	J/mol×K	813.83	Joback Method
cpg	1241.93	J/mol×K	844.70	Joback Method
cpg	1265.01	J/mol×K	875.58	Joback Method
cpg	1286.82	J/mol×K	906.45	Joback Method
cpg	1307.43	J/mol×K	937.32	Joback Method

cpg	1326.88	J/mol×K	968.20	Joback Method
cpg	1345.23	J/mol×K	999.07	Joback Method
dvisc	0.0021271	Pa×s	390.16	Joback Method
dvisc	0.0006855	Pa×s	460.77	Joback Method
dvisc	0.0002985	Pa×s	531.38	Joback Method
dvisc	0.0001580	Pa×s	601.99	Joback Method
dvisc	0.0000956	Pa×s	672.61	Joback Method
dvisc	0.0000636	Pa×s	743.22	Joback Method
dvisc	0.0000454	Pa×s	813.83	Joback Method
hvapt	94.20	kJ/mol	518.50	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C4443554&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
hvapt: Enthalpy of vaporization at a given temperature
log10ws: Log10 of Water solubility in mol/l
logp: Octanol/Water partition coefficient
mcvol: McGowan's characteristic volume
pc: Critical Pressure
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume

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