

Cyclohexane, (1-propylheptadecyl)-

Other names:	4-Cyclohexyleicosane Eicosane, 4-cyclohexyl-
Inchi:	InChI=1S/C26H52/c1-3-5-6-7-8-9-10-11-12-13-14-15-16-18-22-25(21-4-2)26-23-19-17-20
InchiKey:	IBXHOJGRWDXKSM-UHFFFAOYSA-N
Formula:	C26H52
SMILES:	CCCCCCCCCCCCCCCCCC(CCC)C1CCCCC1
Mol. weight [g/mol]:	364.69
CAS:	4443-58-7

Physical Properties

Property code	Value	Unit	Source
gf	190.05	kJ/mol	Joback Method
hf	-530.93	kJ/mol	Joback Method
hfus	51.41	kJ/mol	Joback Method
hvap	73.51	kJ/mol	Joback Method
log10ws	-10.12		Crippen Method
logp	9.854		Crippen Method
mvol	366.340	ml/mol	McGowan Method
pc	815.86	kPa	Joback Method
tb	813.39	K	Joback Method
tc	999.44	K	Joback Method
tf	289.15 ± 0.50	K	NIST Webbook
vc	1.419	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1345.98	J/mol×K	999.44	Joback Method
cpg	1217.92	J/mol×K	813.39	Joback Method
cpg	1242.43	J/mol×K	844.40	Joback Method
cpg	1265.60	J/mol×K	875.41	Joback Method
cpg	1287.48	J/mol×K	906.41	Joback Method
cpg	1308.14	J/mol×K	937.42	Joback Method
cpg	1327.62	J/mol×K	968.43	Joback Method

dvisc	0.0000417	Paxs	813.39	Joback Method
dvisc	0.0027649	Paxs	375.16	Joback Method
dvisc	0.0007775	Paxs	448.20	Joback Method
dvisc	0.0003120	Paxs	521.24	Joback Method
dvisc	0.0001567	Paxs	594.27	Joback Method
dvisc	0.0000915	Paxs	667.31	Joback Method
dvisc	0.0000594	Paxs	740.35	Joback Method
hvapt	98.30	kJ/mol	506.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.54934e+01
Coeff. B	-5.97106e+03
Coeff. C	-1.34916e+02
Temperature range (K), min.	527.60
Temperature range (K), max.	721.36

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C4443587&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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