Nonadecane, 2,3-dimethyl-

Other names: 2,3-Dimethylnonadecane
Inchi: InChI=1S/C21H44/c1-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-21(4)20(2)3/h20-21H,5-
InchiKey: JXKFQCQTFUPIFF-UHFFFAOYSA-N
Formula: C21H44
SMILES: CCCCCCCCCCCCCCCCC(C)C(C)C
Mol. weight [g/mol]: 296.57
CAS: 75163-99-4

Physical Properties

Property code	Value	Unit	Source
gf	121.06	kJ/mol	Joback Method
hf	-487.33	kJ/mol	Joback Method
hfus	43.10	kJ/mol	Joback Method
hvap	61.56	kJ/mol	Joback Method
log10ws	-8.13		Crippen Method
logp	8.150		Crippen Method
mcvol	306.750	ml/mol	McGowan Method
pc	965.67	kPa	Joback Method
tb	679.00	K	Joback Method
tc	843.74	K	Joback Method
tf	296.43	K	Joback Method
vc	1.200	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1018.82	J/mol×K	843.74	Joback Method
cpg	901.43	J/mol×K	679.00	Joback Method
cpg	923.24	J/mol×K	706.46	Joback Method
cpg	944.11	J/mol×K	733.91	Joback Method
cpg	964.07	J/mol×K	761.37	Joback Method
cpg	983.16	J/mol×K	788.83	Joback Method
cpg	1001.40	J/mol×K	816.28	Joback Method
dvisc	0.0000737	Pa×s	679.00	Joback Method

dvisc	0.0065804	Pa×s	296.43	Joback Method
dvisc	0.0016043	Pa×s	360.19	Joback Method
dvisc	0.0005980	Pa×s	423.95	Joback Method
dvisc	0.0002885	Pa×s	487.71	Joback Method
dvisc	0.0001648	Pa×s	551.48	Joback Method
dvisc	0.0001057	Pa×s	615.24	Joback Method
hvapt	68.80	kJ/mol	564.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.78871e+01
Coeff. B	-8.44100e+03
Coeff. C	1.14280e+01
Temperature range (K), min.	468.19
Temperature range (K), max.	659.79

Sources

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

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C75163994&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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