Tritetracontane

Inchi: InChI=1S/C43H88/c1-3-5-7-9-11-13-15-17-19-21-23-25-27-29-31-33-35-37-39-41-43-42-
InchiKey: PKBVGJFKBPLWOD-UHFFFAOYSA-N
Formula: C43H88
SMILES: CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Mol. weight [g/mol]: 605.16
CAS: 7098-21-7

Physical Properties

Property code	Value	Unit	Source
gf	311.18	kJ/mol	Joback Method
hf	-930.85	kJ/mol	Joback Method
hfus	107.13	kJ/mol	Joback Method
hvap	111.31	kJ/mol	Joback Method
log10ws	-17.82		Crippen Method
logp	17.020		Crippen Method
mcvol	616.730	ml/mol	McGowan Method
pc	349.90	kPa	Joback Method
tb	1183.24	K	Joback Method
tc	1657.15	K	Joback Method
tf	358.45 ± 0.25	K	NIST Webbook
tf	357.00 ± 2.00	K	NIST Webbook
tf	358.20 ± 2.00	K	NIST Webbook
tf	358.20 ± 1.00	K	NIST Webbook
tf	357.70 ± 2.00	K	NIST Webbook
tf	357.00 ± 4.00	K	NIST Webbook
tf	356.50 ± 4.00	K	NIST Webbook
vc	2.443	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	2389.32	J/mol×K	1183.24	Joback Method
cpg	2617.18	J/mol×K	1578.16	Joback Method
cpg	2576.17	J/mol×K	1499.18	Joback Method

cpg	2534.36	J/mol×K	1420.19	Joback Method
cpg	2490.27	J/mol×K	1341.21	Joback Method
cpg	2442.42	J/mol×K	1262.22	Joback Method
cpg	2658.86	J/mol×K	1657.15	Joback Method
dvisc	0.0000030	Pa×s	1183.24	Joback Method
dvisc	0.0000043	Pa×s	1081.76	Joback Method
dvisc	0.0000065	Pa×s	980.28	Joback Method
dvisc	0.0000108	Pa×s	878.80	Joback Method
dvisc	0.0000207	Pa×s	777.33	Joback Method
dvisc	0.0000480	Pa×s	675.85	Joback Method
dvisc	0.0001502	Pa×s	574.37	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.40245e+01
Coeff. B	-5.46721e+03
Coeff. C	-2.43550e+02
Temperature range (K), min.	641.54
Temperature range (K), max.	871.03

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=C7098217&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
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