1-Tetracosene

Other names: tetracosene
Inchi: InChI=1S/C24H48/c1-3-5-7-9-11-13-15-17-19-21-23-24-22-20-18-16-14-12-10-8-6-4-2/h3
InchiKey: ZDLBWMYNYNATIW-UHFFFAOYSA-N
Formula: C24H48
SMILES: C=CCCCCCCCCCCCCCCCCCCCCCC
Mol. weight [g/mol]: 336.64
CAS: 10192-32-2

Physical Properties

Property code	Value	Unit	Source
gf	239.04	kJ/mol	Joback Method
hf	-413.26	kJ/mol	Joback Method
hfus	56.64	kJ/mol	Joback Method
hvap	68.35	kJ/mol	Joback Method
log10ws	-9.72		Crippen Method
logp	9.384		Crippen Method
mcvol	344.720	ml/mol	McGowan Method
pc	825.74	kPa	Joback Method
rinpol	2390.20		NIST Webbook
rinpol	2391.00		NIST Webbook
rinpol	2378.00		NIST Webbook
rinpol	2390.20		NIST Webbook
rinpol	2394.00		NIST Webbook
rinpol	2396.00		NIST Webbook
rinpol	2394.00		NIST Webbook
rinpol	2395.00		NIST Webbook
rinpol	2396.00		NIST Webbook
rinpol	2395.00		NIST Webbook
rinpol	2394.00		NIST Webbook
rinpol	2391.00		NIST Webbook
tb	745.20	K	Joback Method
tc	914.84	K	Joback Method
tf	358.48	K	Joback Method
vc	1.361	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1180.59	J/mol×K	914.84	Joback Method
cpg	1162.95	J/mol×K	886.57	Joback Method
cpg	1144.47	J/mol×K	858.29	Joback Method
cpg	1125.11	J/mol×K	830.02	Joback Method
cpg	1104.82	J/mol×K	801.75	Joback Method
cpg	1083.56	J/mol×K	773.47	Joback Method
cpg	1061.30	J/mol×K	745.20	Joback Method
dvisc	0.0023024	Pa×s	358.48	Joback Method
dvisc	0.0000613	Pa×s	745.20	Joback Method
dvisc	0.0000842	Pa×s	680.75	Joback Method
dvisc	0.0001238	Pa×s	616.29	Joback Method
dvisc	0.0001990	Pa×s	551.84	Joback Method
dvisc	0.0003627	Pa×s	487.39	Joback Method
dvisc	0.0007937	Pa×s	422.93	Joback Method
hvapt	101.00	kJ/mol	540.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.37385e+01
Coeff. B	-4.28308e+03
Coeff. C	-1.86596e+02
Temperature range (K), min.	505.02
Temperature range (K), max.	694.85

Sources

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=C10192322&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/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume