7-Tetradecene

Other names: 7-Tetradecene,c&t
Tetradec-7-ene
Inchi: InChI=1S/C14H28/c1-3-5-7-9-11-13-14-12-10-8-6-4-2/h13-14H,3-12H2,1-2H3
InchiKey: UBDIXSAEHLOROW-UHFFFAOYSA-N
Formula: C14H28
SMILES: CCCCCCC=CCCCCCC
Mol. weight [g/mol]: 196.37
CAS: 10374-74-0

Physical Properties

Property code	Value	Unit	Source
gf	147.22	kJ/mol	Joback Method
hf	-215.07	kJ/mol	Joback Method
hfus	32.22	kJ/mol	Joback Method
hvap	46.72	kJ/mol	Joback Method
log10ws	-5.54		Crippen Method
logp	5.483		Crippen Method
mcvol	203.820	ml/mol	McGowan Method
pc	1587.28	kPa	Joback Method
rinpol	1367.00		NIST Webbook
rinpol	1367.00		NIST Webbook
rinpol	1370.00		NIST Webbook
tb	523.88	K	Joback Method
tc	689.82	K	Joback Method
tf	242.46	K	Joback Method
vc	0.799	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	488.90	J/mol×K	523.88	Joback Method
cpg	506.77	J/mol×K	551.54	Joback Method
cpg	523.90	J/mol×K	579.19	Joback Method
cpg	540.31	J/mol×K	606.85	Joback Method

cpg	556.03	J/mol×K	634.51	Joback Method
cpg	571.08	J/mol×K	662.16	Joback Method
cpg	585.50	J/mol×K	689.82	Joback Method
dvisc	0.0054364	Pa×s	242.46	Joback Method
dvisc	0.0018593	Pa×s	289.36	Joback Method
dvisc	0.0008577	Pa×s	336.27	Joback Method
dvisc	0.0004782	Pa×s	383.17	Joback Method
dvisc	0.0003029	Pa×s	430.07	Joback Method
dvisc	0.0002098	Pa×s	476.98	Joback Method
dvisc	0.0001553	Pa×s	523.88	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.73911e+01
Coeff. B	-5.44627e+03
Coeff. C	-9.00450e+01
Temperature range (K), min.	408.48
Temperature range (K), max.	540.91

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=C10374740&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
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