9-Eicosene

Inchi: InChI=1S/C20H40/c1-3-5-7-9-11-13-15-17-19-20-18-16-14-12-10-8-6-4-2/h17,19H,3-16,1
InchiKey: UVLKUUBSZXVVDZ-HTXNQAPBSA-N
Formula: C20H40
SMILES: CCCCCCCCC=CCCCCCCCCCC
Mol. weight [g/mol]: 280.53
CAS: 42448-90-8

Physical Properties

Property code	Value	Unit	Source
gf	197.74	kJ/mol	Joback Method
hf	-338.91	kJ/mol	Joback Method
hfus	47.76	kJ/mol	Joback Method
hvap	60.07	kJ/mol	Joback Method
log10ws	-8.05		Crippen Method
logp	7.824		Crippen Method
mcvol	288.360	ml/mol	McGowan Method
pc	1050.05	kPa	Joback Method
ripol	1914.00		NIST Webbook
tb	661.16	K	Joback Method
tc	825.52	K	Joback Method
tf	310.08	K	Joback Method
vc	1.135	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	819.91	J/mol×K	661.16	Joback Method
cpg	840.43	J/mol×K	688.55	Joback Method
cpg	860.08	J/mol×K	715.95	Joback Method
cpg	878.88	J/mol×K	743.34	Joback Method
cpg	896.89	J/mol×K	770.73	Joback Method
cpg	914.12	J/mol×K	798.12	Joback Method
cpg	930.61	J/mol×K	825.52	Joback Method
dvisc	0.0034359	Pa×s	310.08	Joback Method

dvisc	0.0011313	Pa×s	368.59	Joback Method
dvisc	0.0005050	Pa×s	427.11	Joback Method
dvisc	0.0002738	Pa×s	485.62	Joback Method
dvisc	0.0001694	Pa×s	544.13	Joback Method
dvisc	0.0001150	Pa×s	602.65	Joback Method
dvisc	0.0000836	Pa×s	661.16	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.58107e+01
Coeff. B	-5.54715e+03
Coeff. C	-1.10772e+02
Temperature range (K), min.	468.12
Temperature range (K), max.	639.11

Sources

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
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=C42448908&Units=SI

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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume