Octadecene

Inchi: InChI=1S/C18H36/c1-3-5-7-9-11-13-15-17-18-16-14-12-10-8-6-4-2/h3H,1,4-18H2,2H3
InchiKey: CCCMONHAUSKTEQ-UHFFFAOYSA-N
Formula: C18H36
SMILES: C=CCCCCCCCCCCCCCCCC
Mol. weight [g/mol]: 252.48
CAS: 27070-58-2

Physical Properties

Property code	Value	Unit	Source
gf	188.52	kJ/mol	Joback Method
hf	-289.42	kJ/mol	Joback Method
hfus	41.10	kJ/mol	Joback Method
hvap	54.99	kJ/mol	Joback Method
log10ws	-7.21		Crippen Method
logp	7.044		Crippen Method
mcvol	260.180	ml/mol	McGowan Method
pc	1185.79	kPa	Joback Method
rinpol	1786.00		NIST Webbook
rinpol	1797.00		NIST Webbook
ripol	1823.00		NIST Webbook
ripol	1812.00		NIST Webbook
tb	607.92	K	Joback Method
tc	768.56	K	Joback Method
tf	290.86	K	Joback Method
vc	1.024	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	701.21	J/mol×K	607.92	Joback Method
cpg	720.85	J/mol×K	634.69	Joback Method
cpg	739.69	J/mol×K	661.47	Joback Method
cpg	757.75	J/mol×K	688.24	Joback Method
cpg	775.06	J/mol×K	715.02	Joback Method

cpg	791.64	J/mol×K	741.79	Joback Method
cpg	807.53	J/mol×K	768.56	Joback Method
dvisc	0.0041476	Pa×s	290.86	Joback Method
dvisc	0.0014873	Pa×s	343.70	Joback Method
dvisc	0.0007010	Pa×s	396.55	Joback Method
dvisc	0.0003943	Pa×s	449.39	Joback Method
dvisc	0.0002504	Pa×s	502.23	Joback Method
dvisc	0.0001733	Pa×s	555.08	Joback Method
dvisc	0.0001279	Pa×s	607.92	Joback Method

Sources

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=C27070582&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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

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