1-NONADECENE

Other names: Nonadec-1-ene
Inchi: InChI=1S/C19H38/c1-3-5-7-9-11-13-15-17-19-18-16-14-12-10-8-6-4-2/h3H,1,4-19H2,2H3
InchiKey: NHLUYCJZUXOUBX-UHFFFAOYSA-N
Formula: C19H38
SMILES: C=CCCCCCCCCCCCCCCCCC
Mol. weight [g/mol]: 266.51
CAS: 18435-45-5

Physical Properties

Property code	Value	Unit	Source
af	0.7470		KDB
gf	196.94	kJ/mol	Joback Method
hf	-325.11	kJ/mol	Cheméo Relay (1.0)
hfus	43.69	kJ/mol	Joback Method
hvap	95.00	kJ/mol	NIST Webbook
ie	9.60	eV	Cheméo Relay (1.0)
log10ws	-8.04		Cheméo Relay (1.0)
logp	7.434		Crippen Method
mcvol	274.270	ml/mol	McGowan Method
pc	1110.00	kPa	KDB
rinpol	1883.00		NIST Webbook
rinpol	298.50		NIST Webbook
rinpol	1883.00		NIST Webbook
rinpol	1894.00		NIST Webbook
rinpol	1899.00		NIST Webbook
rinpol	1880.00		NIST Webbook
rinpol	1890.00		NIST Webbook
rinpol	1892.00		NIST Webbook
rinpol	1891.00		NIST Webbook
rinpol	1885.00		NIST Webbook
rinpol	1892.00		NIST Webbook
rinpol	1893.00		NIST Webbook
rinpol	1881.00		NIST Webbook
rinpol	1891.00		NIST Webbook
rinpol	1890.00		NIST Webbook
rinpol	1894.00		NIST Webbook
rinpol	1890.00		NIST Webbook

rinpol	1892.00		NIST Webbook
rinpol	1875.00		NIST Webbook
rinpol	1895.00		NIST Webbook
rinpol	298.50		NIST Webbook
rinpol	1883.00		NIST Webbook
rinpol	1892.00		NIST Webbook
rinpol	1885.00		NIST Webbook
rinpol	1899.00		NIST Webbook
rinpol	1883.00		NIST Webbook
rinpol	1891.00		NIST Webbook
ripol	1960.00		NIST Webbook
ripol	1956.00		NIST Webbook
ripol	1938.00		NIST Webbook
ripol	1943.00		NIST Webbook
ripol	1920.00		NIST Webbook
tb	601.70	K	KDB
tc	755.10	K	KDB
tf	297.00	K	KDB
vc	1.107	m3/kmol	KDB
zc	0.1956290		KDB

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	758.40	J/mol×K	630.80	Joback Method
cpg	866.86	J/mol×K	791.77	Joback Method
cpg	850.67	J/mol×K	764.94	Joback Method
cpg	833.77	J/mol×K	738.11	Joback Method
cpg	816.11	J/mol×K	711.28	Joback Method
cpg	797.68	J/mol×K	684.46	Joback Method
cpg	778.46	J/mol×K	657.63	Joback Method
dvisc	0.0002254	Pa×s	521.24	Joback Method
dvisc	0.0001144	Pa×s	630.80	Joback Method
dvisc	0.0001555	Pa×s	576.02	Joback Method
dvisc	0.0038207	Pa×s	302.13	Joback Method
dvisc	0.0003564	Pa×s	466.46	Joback Method
dvisc	0.0006367	Pa×s	411.69	Joback Method
dvisc	0.0013594	Pa×s	356.91	Joback Method
hvapt	63.30	kJ/mol	582.00	NIST Webbook
hvapt	54.81	kJ/mol	601.70	KDB

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.58056e+01
Coeff. B	-5.41610e+03
Coeff. C	-1.08726e+02
Temperature range (K), min.	457.75
Temperature range (K), max.	624.83

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/T + C*ln(T) + D*T^2
Coeff. A	2.16828e+02
Coeff. B	-2.01039e+04
Coeff. C	-2.85243e+01
Coeff. D	1.03581e-05
Temperature range (K), min.	296.55
Temperature range (K), max.	760.00

Sources

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Joback Method: https://en.wikipedia.org/wiki/Joback_method
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws
KDB Vapor Pressure Data: https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=354
KDB: https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=354
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C18435455&Units=SI
McGowan Method: http://link.springer.com/article/10.1007/BF02311772
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Cheméo Relay (1.0):
Cheméo Relay (1.0, beta):

Legend

af:	Acentric Factor
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
ie:	Ionization energy
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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume
zc:	Critical Compressibility