

Nonadecanal

Inchi:	InChI=1S/C19H38O/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20/h19H,2-18H2
InchiKey:	SXIYYZWCMUFWBW-UHFFFAOYSA-N
Formula:	C19H38O
SMILES:	CCCCCCCCCCCCCCCCC=O
Mol. weight [g/mol]:	282.50
CAS:	17352-32-8

Physical Properties

Property code	Value	Unit	Source
gf	9.58	kJ/mol	Joback Method
hf	-521.07	kJ/mol	Joback Method
hfus	47.26	kJ/mol	Joback Method
hvap	64.61	kJ/mol	Joback Method
log10ws	-7.06		Crippen Method
logp	6.837		Crippen Method
mcvol	280.140	ml/mol	McGowan Method
pc	1135.20	kPa	Joback Method
rinpol	2127.00		NIST Webbook
rinpol	2100.00		NIST Webbook
rinpol	2102.00		NIST Webbook
rinpol	2107.00		NIST Webbook
rinpol	2110.00		NIST Webbook
rinpol	2110.00		NIST Webbook
rinpol	2107.00		NIST Webbook
rinpol	2105.00		NIST Webbook
ripol	2604.00		NIST Webbook
ripol	2604.00		NIST Webbook
tb	682.78	K	Joback Method
tc	848.30	K	Joback Method
tf	345.89	K	Joback Method
vc	1.117	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	814.87	J/mol×K	682.78	Joback Method
cpg	834.08	J/mol×K	710.37	Joback Method
cpg	852.44	J/mol×K	737.95	Joback Method
cpg	870.00	J/mol×K	765.54	Joback Method
cpg	886.77	J/mol×K	793.13	Joback Method
cpg	902.79	J/mol×K	820.71	Joback Method
cpg	918.08	J/mol×K	848.30	Joback Method
dvisc	0.0031937	Paxs	345.89	Joback Method
dvisc	0.0012658	Paxs	402.04	Joback Method
dvisc	0.0006294	Paxs	458.19	Joback Method
dvisc	0.0003646	Paxs	514.34	Joback Method
dvisc	0.0002351	Paxs	570.48	Joback Method
dvisc	0.0001640	Paxs	626.63	Joback Method
dvisc	0.0001214	Paxs	682.78	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.54023e+01
Coeff. B	-5.54158e+03
Coeff. C	-1.14386e+02
Temperature range (K), min.	481.02
Temperature range (K), max.	663.55

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=R71701&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/ci9903071

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

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