

1,2-Nonadecanediol

Other names:	Nonadecanediol-1,2
Inchi:	InChI=1S/C19H40O2/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-19(21)18-20/h19-21H
InchiKey:	OFLPOBPCVHNRMF-UHFFFAOYSA-N
Formula:	C19H40O2
SMILES:	CCCCCCCCCCCCCCCCC(O)CO
Mol. weight [g/mol]:	300.52
CAS:	39516-65-9

Physical Properties

Property code	Value	Unit	Source
gf	-166.98	kJ/mol	Joback Method
hf	-745.23	kJ/mol	Joback Method
hfus	49.62	kJ/mol	Joback Method
hvap	90.86	kJ/mol	Joback Method
log10ws	-6.41		Crippen Method
logp	5.601		Crippen Method
mcvol	290.310	ml/mol	McGowan Method
pc	1231.15	kPa	Joback Method
tb	818.04	K	Joback Method
tc	1001.89	K	Joback Method
tf	410.53	K	Joback Method
vc	1.131	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	944.18	J/mol×K	818.04	Joback Method
cpg	961.97	J/mol×K	848.68	Joback Method
cpg	978.86	J/mol×K	879.32	Joback Method
cpg	994.90	J/mol×K	909.96	Joback Method
cpg	1010.11	J/mol×K	940.60	Joback Method
cpg	1024.55	J/mol×K	971.25	Joback Method
cpg	1038.26	J/mol×K	1001.89	Joback Method
dvisc	0.0026272	Pa×s	410.53	Joback Method

dvisc	0.0003820	Pa×s	478.45	Joback Method
dvisc	0.0000897	Pa×s	546.37	Joback Method
dvisc	0.0000290	Pa×s	614.28	Joback Method
dvisc	0.0000118	Pa×s	682.20	Joback Method
dvisc	0.0000056	Pa×s	750.12	Joback Method
dvisc	0.0000030	Pa×s	818.04	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	2.84577e+01
Coeff. B	-1.12784e+04
Coeff. C	-1.29954e+02
Temperature range (K), min.	530.32
Temperature range (K), max.	617.22

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=C39516659&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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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