1,8-Nonadiene

Other names: nona-1,8-diene
Inchi: InChI=1S/C9H16/c1-3-5-7-9-8-6-4-2/h3-4H,1-2,5-9H2
InchiKey: VJHGSLHHMIELQD-UHFFFAOYSA-N
Formula: C9H16
SMILES: C=CCCCCCC=C
Mol. weight [g/mol]: 124.22
CAS: 4900-30-5

Physical Properties

Property code	Value	Unit	Source
gf	200.58	kJ/mol	Joback Method
hf	21.77	kJ/mol	Joback Method
hfus	16.51	kJ/mol	Joback Method
hvap	34.29	kJ/mol	Joback Method
ie	9.51 ± 0.02	eV	NIST Webbook
log10ws	-3.30		Crippen Method
logp	3.309		Crippen Method
mcvol	129.070	ml/mol	McGowan Method
pc	2505.01	kPa	Joback Method
rinpol	862.70		NIST Webbook
rinpol	876.00		NIST Webbook
rinpol	883.00		NIST Webbook
rinpol	892.00		NIST Webbook
rinpol	882.00		NIST Webbook
tb	416.00 ± 4.00	K	NIST Webbook
tb	413.00 ± 2.00	K	NIST Webbook
tb	415.00 ± 2.00	K	NIST Webbook
tb	415.70	K	NIST Webbook
tc	568.34	K	Joback Method
tf	187.67	K	Joback Method
vc	0.501	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	242.13	J/mol×K	398.68	Joback Method
cpg	255.23	J/mol×K	426.96	Joback Method
cpg	267.78	J/mol×K	455.23	Joback Method
cpg	279.79	J/mol×K	483.51	Joback Method
cpg	291.30	J/mol×K	511.79	Joback Method
cpg	302.30	J/mol×K	540.07	Joback Method
cpg	312.82	J/mol×K	568.34	Joback Method
dvisc	0.0042470	Pa×s	187.67	Joback Method
dvisc	0.0017898	Pa×s	222.84	Joback Method
dvisc	0.0009546	Pa×s	258.01	Joback Method
dvisc	0.0005920	Pa×s	293.18	Joback Method
dvisc	0.0004067	Pa×s	328.34	Joback Method
dvisc	0.0003005	Pa×s	363.51	Joback Method
dvisc	0.0002342	Pa×s	398.68	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.55780e+01
Coeff. B	-3.93452e+03
Coeff. C	-5.67010e+01
Temperature range (K), min.	314.02
Temperature range (K), max.	439.94

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=C4900305&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
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume