Nonadecane, 1-bromo-

Other names: 1-Bromononadecane
Nonadecyl bromide
Inchi: InChI=1S/C19H39Br/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20/h2-19H2,1H
InchiKey: GWESGLGUMMNXDU-UHFFFAOYSA-N
Formula: C19H39Br
SMILES: CCCCCCCCCCCCCCCCCCCBr
Mol. weight [g/mol]: 347.42
CAS: 4434-66-6

Physical Properties

Property code	Value	Unit	Source
gf	123.42	kJ/mol	Joback Method
hf	-409.16	kJ/mol	Joback Method
hfus	50.25	kJ/mol	Joback Method
hvap	64.32	kJ/mol	Joback Method
log10ws	-8.21		Crippen Method
logp	8.033		Crippen Method
mcvol	296.070	ml/mol	McGowan Method
pc	1131.38	kPa	Joback Method
tb	700.28	K	Joback Method
tc	871.42	K	Joback Method
tf	310.90 ± 4.00	K	NIST Webbook
vc	1.161	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	947.08	J/mol×K	871.42	Joback Method
cpg	931.61	J/mol×K	842.90	Joback Method
cpg	915.40	J/mol×K	814.38	Joback Method
cpg	898.43	J/mol×K	785.85	Joback Method
cpg	880.65	J/mol×K	757.33	Joback Method
cpg	862.03	J/mol×K	728.80	Joback Method
cpg	842.54	J/mol×K	700.28	Joback Method

dvisc	0.0021664	Pa×s	363.69	Joback Method
dvisc	0.0000927	Pa×s	700.28	Joback Method
dvisc	0.0001247	Pa×s	644.18	Joback Method
dvisc	0.0001776	Pa×s	588.08	Joback Method
dvisc	0.0002723	Pa×s	531.99	Joback Method
dvisc	0.0004618	Pa×s	475.89	Joback Method
dvisc	0.0009021	Pa×s	419.79	Joback Method
hvapt	77.90	kJ/mol	583.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.51999e+01
Coeff. B	-5.61689e+03
Coeff. C	-1.21058e+02
Temperature range (K), min.	497.72
Temperature range (K), max.	689.09

Sources

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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=C4434666&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
hvapt:	Enthalpy of vaporization at a given temperature
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