Nonane, 5-chloro-

Other names: 5-chlorononane
Inchi: InChI=1S/C9H19Cl/c1-3-5-7-9(10)8-6-4-2/h9H,3-8H2,1-2H3
InchiKey: GHLDSOWZIOPMTC-UHFFFAOYSA-N
Formula: C9H19Cl
SMILES: CCCCC(Cl)CCCC
Mol. weight [g/mol]: 162.70
CAS: 28123-70-8

Physical Properties

Property code	Value	Unit	Source
gf	10.53	kJ/mol	Joback Method
hf	-250.11	kJ/mol	Joback Method
hfus	19.74	kJ/mol	Joback Method
hvap	39.62	kJ/mol	Joback Method
log10ws	-3.85		Crippen Method
logp	3.974		Crippen Method
mcvol	149.910	ml/mol	McGowan Method
pc	2244.00	kPa	Joback Method
rinpol	1092.00		NIST Webbook
rinpol	1092.00		NIST Webbook
rinpol	1092.00		NIST Webbook
ripol	1243.00		NIST Webbook
ripol	1243.00		NIST Webbook
tb	442.31	K	Joback Method
tc	615.85	K	Joback Method
tf	206.11	K	Joback Method
vc	0.583	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	304.70	J/mol×K	442.31	Joback Method
cpg	369.96	J/mol×K	586.93	Joback Method
cpg	357.99	J/mol×K	558.00	Joback Method

cpg	345.50	J/mol×K	529.08	Joback Method
cpg	332.46	J/mol×K	500.16	Joback Method
cpg	318.86	J/mol×K	471.23	Joback Method
cpg	381.42	J/mol×K	615.85	Joback Method
dvisc	0.0002539	Pa×s	442.31	Joback Method
dvisc	0.0003434	Pa×s	402.94	Joback Method
dvisc	0.0004959	Pa×s	363.58	Joback Method
dvisc	0.0007828	Pa×s	324.21	Joback Method
dvisc	0.0014020	Pa×s	284.84	Joback Method
dvisc	0.0030269	Pa×s	245.48	Joback Method
dvisc	0.0087685	Pa×s	206.11	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.42725e+01
Coeff. B	-3.92436e+03
Coeff. C	-6.99060e+01
Temperature range (K), min.	350.52
Temperature range (K), max.	507.84

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=C28123708&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
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