

1,9-Dichlorononane

Other names:	Nonane, 1,9-dichloro-
Inchi:	InChI=1S/C9H18Cl2/c10-8-6-4-2-1-3-5-7-9-11/h1-9H2
InchiKey:	JMGRNJZUQCEJDB-UHFFFAOYSA-N
Formula:	C9H18Cl2
SMILES:	C1CCCCCCCCCI
Mol. weight [g/mol]:	197.15
CAS:	821-99-8

Physical Properties

Property code	Value	Unit	Source
gf	1.04	kJ/mol	Joback Method
hf	-260.57	kJ/mol	Joback Method
hfus	27.46	kJ/mol	Joback Method
hvap	44.40	kJ/mol	Joback Method
log10ws	-3.90		Crippen Method
logp	4.195		Crippen Method
mcvol	162.150	ml/mol	McGowan Method
pc	2151.31	kPa	Joback Method
rinpol	1435.00		NIST Webbook
rinpol	1435.00		NIST Webbook
tb	533.20	K	NIST Webbook
tc	656.08	K	Joback Method
tf	251.03	K	Joback Method
vc	0.637	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	335.20	J/molxK	480.18	Joback Method
cpg	396.31	J/molxK	626.76	Joback Method
cpg	385.16	J/molxK	597.45	Joback Method
cpg	373.50	J/molxK	568.13	Joback Method
cpg	361.29	J/molxK	538.81	Joback Method
cpg	348.53	J/molxK	509.50	Joback Method

cpg	406.96	J/molxK	656.08	Joback Method
dvisc	0.0002713	Paxs	480.18	Joback Method
dvisc	0.0003555	Paxs	441.99	Joback Method
dvisc	0.0004900	Paxs	403.80	Joback Method
dvisc	0.0007225	Paxs	365.61	Joback Method
dvisc	0.0011661	Paxs	327.41	Joback Method
dvisc	0.0021358	Paxs	289.22	Joback Method
dvisc	0.0047028	Paxs	251.03	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	411.70	K	2.30	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.60842e+01
Coeff. B	-5.08894e+03
Coeff. C	-8.93660e+01
Temperature range (K), min.	411.52
Temperature range (K), max.	561.76

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=C821998&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
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
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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