N,N-Diisopropylformamide

Other names:	Formamide, N,N-bis(1-methylethyl)- Formamide, N,N-diisopropyl- N,N-bis(1-methylethyl)formamide
Inchi:	InChI=1S/C7H15NO/c1-6(2)8(5-9)7(3)4/h5-7H,1-4H3
InchiKey:	UNBDDZDKBWPHAX-UHFFFAOYSA-N
Formula:	C7H15NO
SMILES:	CC(C)N(C=O)C(C)C
Mol. weight [g/mol]:	129.20
CAS:	2700-30-3

Physical Properties

Property code	Value	Unit	Source
gf	14.44	kJ/mol	Joback Method
hf	-216.42	kJ/mol	Joback Method
hfus	12.15	kJ/mol	Joback Method
hvap	39.16	kJ/mol	Joback Method
log10ws	-1.32		Crippen Method
logp	1.262		Crippen Method
mcvol	121.040	ml/mol	McGowan Method
pc	3079.57	kPa	Joback Method
tb	468.50 ± 0.50	K	NIST Webbook
tc	597.79	K	Joback Method
tf	213.12	K	Joback Method
vc	0.451	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	246.14	J/mol×K	419.78	Joback Method
cpg	258.95	J/mol×K	449.45	Joback Method
cpg	271.18	J/mol×K	479.12	Joback Method
cpg	282.86	J/mol×K	508.78	Joback Method
cpg	294.00	J/mol×K	538.45	Joback Method
cpg	304.62	J/mol×K	568.12	Joback Method

cpg	314.73	J/mol×K	597.79	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.51517e+01
Coeff. B	-4.18365e+03
Coeff. C	-7.14210e+01
Temperature range (K), min.	352.88
Temperature range (K), max.	496.58

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=C2700303&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
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