N,N-Dimethylpivalamide

Other names:	N,N,2,2-Tetramethylpropionamide
	N,N,2,2-Tetramethylpropanamide
	2,2-Dimethylpropionic acid dimethylamide
	N,N-Dimethyl-tert-butylcarboxamide
Inchi:	InChI=1S/C7H15NO/c1-7(2,3)6(9)8(4)5/h1-5H3
InchiKey:	RLVGHTRVYWUWSH-UHFFFAOYSA-N
Formula:	C7H15NO
SMILES:	CN(C)C(=O)C(C)(C)C
Mol. weight [g/mol]:	129.20
CAS:	24331-71-3

Physical Properties

Property code	Value	Unit	Source
affp	927.10	kJ/mol	NIST Webbook
basg	895.20	kJ/mol	NIST Webbook
basg	899.00 ± 5.00	kJ/mol	NIST Webbook
chs	-4557.10 ± 1.90	kJ/mol	NIST Webbook
gf	-7.24	kJ/mol	Joback Method
hf	-286.10 ± 2.10	kJ/mol	NIST Webbook
hfs	-341.20 ± 2.10	kJ/mol	NIST Webbook
hfus	11.09	kJ/mol	Joback Method
hsub	55.10 ± 0.40	kJ/mol	NIST Webbook
hvap	38.67	kJ/mol	Joback Method
log10ws	-0.86		Crippen Method
logp	1.121		Crippen Method
mcvol	121.040	ml/mol	McGowan Method
pc	3052.41	kPa	Joback Method
rinpol	1023.00		NIST Webbook
rinpol	1023.00		NIST Webbook
tb	422.64	K	Joback Method
tc	608.97	K	Joback Method
tf	253.47	K	Joback Method
vc	0.441	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	246.91	J/mol×K	422.64	Joback Method
cpg	260.70	J/mol×K	453.69	Joback Method
cpg	273.75	J/mol×K	484.75	Joback Method
cpg	286.08	J/mol×K	515.80	Joback Method
cpg	297.72	J/mol×K	546.86	Joback Method
cpg	308.71	J/mol×K	577.91	Joback Method
cpg	319.07	J/mol×K	608.97	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	348.50 ± 0.50	K	2.00	NIST Webbook

Sources

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=C24331713&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

affp: Proton affinity
basg: Gas basicity
chs: Standard solid enthalpy of combustion
cpg: Ideal gas heat capacity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions
hfs: Solid phase enthalpy of formation at standard conditions

hfus:	Enthalpy of fusion at standard conditions
hsub:	Enthalpy of sublimation 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
rinpol:	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