

Methanamine, 1,1-dimethoxy-N,N-dimethyl-

Other names:	Trimethylamine, 1,1-dimethoxy-Dimethoxy(dimethylamino)methane Dimethylformamide dimethyl acetal DMF Dimethyl acetal N-(Dimethoxymethyl)dimethylamine N,N-Dimethylformamide dimethyl acetal 1,1-Dimethoxytrimethylamine 1,1-Dimethoxy-N,N-dimethyl-methylamine Dimethylformamide, diethyl acetal
Inchi:	InChI=1S/C5H13NO2/c1-6(2)5(7-3)8-4/h5H,1-4H3
InchiKey:	ZSXGLVDWWRXATF-UHFFFAOYSA-N
Formula:	C5H13NO2
SMILES:	COC(OC)N(C)C
Mol. weight [g/mol]:	119.16
CAS:	4637-24-5

Physical Properties

Property code	Value	Unit	Source
gf	-110.44	kJ/mol	Joback Method
hf	-356.00	kJ/mol	NIST Webbook
hfl	-395.00	kJ/mol	NIST Webbook
hfus	10.58	kJ/mol	Joback Method
hvap	33.20	kJ/mol	Joback Method
log10ws	0.24		Crippen Method
logp	0.124		Crippen Method
mcvol	103.030	ml/mol	McGowan Method
pc	3356.75	kPa	Joback Method
rinpol	726.00		NIST Webbook
tb	370.64	K	Joback Method
tc	538.89	K	Joback Method
tf	208.04	K	Joback Method
vc	0.363	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	194.97	J/mol×K	370.64	Joback Method
cpg	205.13	J/mol×K	398.68	Joback Method
cpg	215.02	J/mol×K	426.72	Joback Method
cpg	224.63	J/mol×K	454.77	Joback Method
cpg	233.97	J/mol×K	482.81	Joback Method
cpg	243.03	J/mol×K	510.85	Joback Method
cpg	251.81	J/mol×K	538.89	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	375.70	K	96.00	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=C4637245&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307I

Legend

cpg:	Ideal gas heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase 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
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

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