2-Propenamide, N,N-dimethyl-

Other names: Acrylamide, N,N-dimethyl-
N,N-Dimethylacrylamide
Acylamide, N,N-dimethyl
Dimethylamid kyseliny akrylove
Propenamide, N,N-dimethyl-
Inchi: InChI=1S/C5H9NO/c1-4-5(7)6(2)3/h4H,1H2,2-3H3
InchiKey: YLGYACDQVQQZSW-UHFFFAOYSA-N
Formula: C5H9NO
SMILES: C=CC(=O)N(C)C
Mol. weight [g/mol]: 99.13
CAS: 2680-03-7

Physical Properties

Property code	Value	Unit	Source
affp	904.30	kJ/mol	NIST Webbook
basg	873.40	kJ/mol	NIST Webbook
gf	60.92	kJ/mol	Joback Method
hf	-66.15	kJ/mol	Joback Method
hfus	12.05	kJ/mol	Joback Method
hvap	34.84	kJ/mol	Joback Method
log10ws	-0.11		Crippen Method
logp	0.261		Crippen Method
mcvol	88.560	ml/mol	McGowan Method
pc	3930.78	kPa	Joback Method
tb	376.79	K	Joback Method
tc	557.36	K	Joback Method
tf	226.75	K	Joback Method
vc	0.321	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	154.25	J/mol×K	376.79	Joback Method
cpg	163.64	J/mol×K	406.88	Joback Method

cpg	172.58	J/mol×K	436.98	Joback Method
cpg	181.08	J/mol×K	467.07	Joback Method
cpg	189.16	J/mol×K	497.17	Joback Method
cpg	196.83	J/mol×K	527.26	Joback Method
cpg	204.11	J/mol×K	557.36	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	353.70	K	2.70	NIST Webbook
tbrp	355.00 ± 1.00	K	2.80	NIST Webbook

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C2680037&Units=SI
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

Legend

affp: Proton affinity
basg: Gas basicity
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
tb: Normal Boiling Point Temperature
tbrp: Boiling point at reduced pressure

tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume