Methacrylamide

Other names:	2-METHACRYLAMIDE
	2-Methylacrylamide
	2-Methylpropenamide
	2-Propenamide, 2-methyl-
	Amid kyseliny methakrylove
	Methacryamide
	Methacrylic acid amide
	Methacrylic amide
	Methylacrylic amide
	Mhoromer BM801
	NSC 23772
	USAF RH-1
	«alpha»-Methyl acrylic amide
	Â«alphaÂ»-Methyl acrylic amide
Inchi:	InChI=1S/C4H7NO/c1-3(2)4(5)6/h1H2,2H3,(H2,5,6)
InchiKey:	FQPSGWSUVKBHSU-UHFFFAOYSA-N
Formula:	C4H7NO
SMILES:	C=C(C)C(N)=O
Mol. weight [g/mol]:	85.10
CAS:	79-39-0

Physical Properties

Property code	Value	Unit	Source
affp	880.40	kJ/mol	NIST Webbook
basg	849.40	kJ/mol	NIST Webbook
chs	-2327.35 ± 0.46	kJ/mol	NIST Webbook
chs	-2323.00 ± 0.40	kJ/mol	NIST Webbook
gf	-0.38	kJ/mol	Joback Method
hf	-157.70 ± 2.10	kJ/mol	NIST Webbook
hfs	-252.00 ± 0.40	kJ/mol	NIST Webbook
hfs	-247.10 ± 0.50	kJ/mol	NIST Webbook
hfus	10.32	kJ/mol	Joback Method
hsub	89.40 ± 2.00	kJ/mol	NIST Webbook
hvap	41.30	kJ/mol	Joback Method
log10ws	-0.56		Crippen Method
logp	0.048		Crippen Method
mcvol	74.470	ml/mol	McGowan Method

pc	4856.20	kPa	Joback Method
tb	413.88	K	Joback Method
tc	617.69	K	Joback Method
tf	252.31	K	Joback Method
vc	0.277	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	137.32	J/mol×K	413.88	Joback Method
cpg	144.79	J/mol×K	447.85	Joback Method
cpg	151.86	J/mol×K	481.82	Joback Method
cpg	158.57	J/mol×K	515.79	Joback Method
cpg	164.92	J/mol×K	549.76	Joback Method
cpg	170.93	J/mol×K	583.72	Joback Method
cpg	176.61	J/mol×K	617.69	Joback Method
cps	143.80	J/mol×K	298.15	NIST Webbook
hfust	15.00	kJ/mol	385.10	NIST Webbook
hfust	15.00	kJ/mol	385.10	NIST Webbook
hfust	15.00	kJ/mol	385.10	NIST Webbook
hvapt	86.30	kJ/mol	404.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/T + C*ln(T) + D*T^2
Coeff. A	1.00018e+02
Coeff. B	-1.08471e+04
Coeff. C	-1.19968e+01
Coeff. D	4.54214e-06
Temperature range (K), min.	383.65
Temperature range (K), max.	741.00

Sources

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=C79390&Units=SI
KDB Vapor Pressure Data:	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1382
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

affp:	Proton affinity
basg:	Gas basicity
chs:	Standard solid enthalpy of combustion
cpg:	Ideal gas heat capacity
cps:	Solid phase 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
hfust:	Enthalpy of fusion at a given temperature
hsub:	Enthalpy of sublimation at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
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