Butanoic acid, 2-methyl-

Other names:	(.+/-.)-2-Methylbutanoic acid
	2-METHYLBUTANOIC ACID
	2-METHYLBUTYRIC ACID
	2-Methybutyric acid
	Active valeric acid
	Butyric acid, 2-methyl-
	DL-2-Methylbutyric acid
	ETHYLMETHYLACETIC ACID
	Methylethylacetic acid
	NSC 7304
	«alpha»-Methylbutyric acid
Inchi:	InChI=1S/C5H10O2/c1-3-4(2)5(6)7/h4H,3H2,1-2H3,(H,6,7)
InchiKey:	WLAMNBDJUVNPJU-UHFFFAOYSA-N
Formula:	C5H10O2
SMILES:	CCC(C)C(=O)O
Mol. weight [g/mol]:	102.13
CAS:	600-07-7

Physical Properties

Property code	Value	Unit	Source
gf	-276.96	kJ/mol	Joback Method
hf	-416.62	kJ/mol	Joback Method
hfus	10.87	kJ/mol	Joback Method
hvap	49.76	kJ/mol	Joback Method
log10ws	-0.77		Crippen Method
logp	1.117		Crippen Method
mcvol	88.750	ml/mol	McGowan Method
pc	4244.08	kPa	Joback Method
tb	450.20	K	NIST Webbook
tc	635.76	K	Joback Method
tf	241.86	K	Joback Method
vc	0.335	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	183.94	J/mol×K	459.41	Joback Method
cpg	191.99	J/mol×K	488.80	Joback Method
cpg	199.72	J/mol×K	518.19	Joback Method
cpg	207.12	J/mol×K	547.58	Joback Method
cpg	214.20	J/mol×K	576.97	Joback Method
cpg	220.97	J/mol×K	606.37	Joback Method
cpg	227.44	J/mol×K	635.76	Joback Method
dvisc	0.0540168	Pa×s	241.86	Joback Method
dvisc	0.0120393	Pa×s	278.12	Joback Method
dvisc	0.0037936	Pa×s	314.38	Joback Method
dvisc	0.0015179	Pa×s	350.63	Joback Method
dvisc	0.0007211	Pa×s	386.89	Joback Method
dvisc	0.0003892	Pa×s	423.15	Joback Method
dvisc	0.0002315	Pa×s	459.41	Joback Method

Sources

Joback Method: https://en.wikipedia.org/wiki/Joback_method
KDB: https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=936
McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C600077&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Legend

cpg: Ideal gas heat capacity
dvisc: Dynamic viscosity
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
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume