2(3H)-Furanone, dihydro-5-methyl-

Other names:	«gamma»-Methyl-«gamma»-butyrolactone
	«gamma»-Pentalactone
	«gamma»-Valerolactone
	Pentanoic acid, 4-hydroxy-, «gamma»-lactone
	4-Hydroxypentanoic acid lactone
	4-Hydroxyvaleric acid lactone
	4-Methyl-«gamma»-butyrolactone
	4-Pentanolide
	4-Valerolactone
	«gamma»-Pentanolactone
	«gamma»-Valerolakton
	Dihydro-5-methyl-2(3H)-furanone
	Valeric acid, 4-hydroxy-, gamma-lactone
	gamma-Valerolactone
	5-Methyldihydrofuran-2(3H)-one
	5-methyltetrahydrofuran-2-one
	Dihydro-5-methyl-2-furanone
	(.+/-.)-«gamma»-Valerolactone
	(.+/-.)-4-Methylbutyrolactone
	5-Methyltetrahydro-2-furanone
	NSC 33700
	Valeric acid, 4-hydroxy-, «gamma»-lactone
	Valerolactone
	5-Methyldihydro-2(3H)-furanone
	Pentan-4-olide
	2(3H)-Furanone, dihydro-5-methyl-, (.+/-.)-
Inchi:	InChI=1S/C5H8O2/c1-4-2-3-5(6)7-4/h4H,2-3H2,1H3
InchiKey:	GAEKPEKOJKCEMS-UHFFFAOYSA-N
Formula:	C5H8O2
SMILES:	CC1CCC(=O)O1
Mol. weight [g/mol]:	100.12
CAS:	57129-69-8

Physical Properties

Property code	Value	Unit	Source
gf	-180.94	kJ/mol	Joback Method

hf	-355.75	kJ/mol	Joback Method
hfus	10.13	kJ/mol	Joback Method
hvap	35.74	kJ/mol	Joback Method
log10ws	-0.78		Crippen Method
logp	0.712		Crippen Method
mcvol	77.890	ml/mol	McGowan Method
pc	4492.23	kPa	Joback Method
tb	479.20	K	NIST Webbook
tc	643.76	K	Joback Method
tf	251.80	K	Joback Method
vc	0.284	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	154.05	J/mol×K	423.85	Joback Method
cpg	165.60	J/mol×K	460.50	Joback Method
cpg	176.71	J/mol×K	497.15	Joback Method
cpg	187.37	J/mol×K	533.80	Joback Method
cpg	197.57	J/mol×K	570.45	Joback Method
cpg	207.30	J/mol×K	607.10	Joback Method
cpg	216.54	J/mol×K	643.76	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	356.70	K	1.70	NIST Webbook

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C57129698&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

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