2(3H)-Furanone, 5-butyldihydro-

Other names:	.gamma.-butylbutyrolactone
	.gamma.-octalactone
	.gamma.-octanolactone
	2(3H)-Furanone, dihydro-5-butyl-
	4-Butyl-«gamma»-butyrolactone
	4-Hydroxyoctanoic acid lactone
	4-Hydroxyoctanoic acid, «gamma»-lactone
	4-Octanolide
	5-Butyldihydrofuran-2(3H)-one
	5-Butyltetrahydro-2-furanone
	5-butyldihydro-2(3H)-furanone
	NSC 24270
	Octan-4-olide
	Octanoic acid, 4-hydroxy-, lactone
	Octanoic acid, 4-hydroxy-, «gamma»-lactone
	Octanoic acid, «gamma» lactone
	Octanolide-1,4
	«gamma» -0ctalactone
	«gamma»-Butyl-«gamma»-butyrolactone
	«gamma»-Butylbutyrolactone
	«gamma»-Octalactone
	«gamma»-Octanolactone
	«gamma»-n-Butyl-«gamma»-butyrolactone
Inchi:	InChI=1S/C8H14O2/c1-2-3-4-7-5-6-8(9)10-7/h7H,2-6H2,1H3
InchiKey:	IPBFYZQJXZJBFQ-UHFFFAOYSA-N
Formula:	C8H14O2
SMILES:	CCCCC1CCC(=O)O1
Mol. weight [g/mol]:	142.20
CAS:	104-50-7

Physical Properties

Property code	Value	Unit	Source
gf	-155.68	kJ/mol	Joback Method
hf	-417.67	kJ/mol	Joback Method
hfus	17.90	kJ/mol	Joback Method
hvap	42.42	kJ/mol	Joback Method

log10ws	-2.04		Crippen Method
logp	1.882		Crippen Method
mcvol	120.160	ml/mol	McGowan Method
pc	3156.17	kPa	Joback Method
rinpol	1210.00		NIST Webbook
rinpol	1216.00		NIST Webbook
rinpol	1210.00		NIST Webbook
rinpol	1209.00		NIST Webbook
rinpol	1230.00		NIST Webbook
rinpol	1261.00		NIST Webbook
rinpol	1215.00		NIST Webbook
rinpol	1225.00		NIST Webbook
rinpol	1225.00		NIST Webbook
rinpol	1277.00		NIST Webbook
rinpol	1211.00		NIST Webbook
rinpol	1261.00		NIST Webbook
rinpol	1259.00		NIST Webbook
rinpol	1268.00		NIST Webbook
rinpol	1266.00		NIST Webbook
rinpol	1250.00		NIST Webbook
rinpol	1261.00		NIST Webbook
rinpol	1261.00		NIST Webbook
rinpol	1208.00		NIST Webbook
rinpol	1269.00		NIST Webbook
rinpol	1262.00		NIST Webbook
rinpol	1224.00		NIST Webbook
rinpol	1214.00		NIST Webbook
rinpol	1230.00		NIST Webbook
rinpol	1243.00		NIST Webbook
rinpol	1210.00		NIST Webbook
rinpol	1218.00		NIST Webbook
rinpol	1218.00		NIST Webbook
rinpol	1215.00		NIST Webbook
rinpol	1213.00		NIST Webbook
rinpol	1255.00		NIST Webbook
rinpol	1210.00		NIST Webbook
rinpol	1216.00		NIST Webbook
rinpol	1266.00		NIST Webbook
rinpol	1215.00		NIST Webbook
rinpol	1215.00		NIST Webbook
rinpol	1260.00		NIST Webbook
rinpol	1260.00		NIST Webbook
rinpol	1208.00		NIST Webbook
rinpol	1261.00		NIST Webbook

rinpol	1259.00	NIST Webbook
rinpol	1261.00	NIST Webbook
rinpol	1259.00	NIST Webbook
rinpol	1256.00	NIST Webbook
rinpol	1257.00	NIST Webbook
rinpol	1264.00	NIST Webbook
rinpol	1225.00	NIST Webbook
rinpol	1223.80	NIST Webbook
rinpol	1209.00	NIST Webbook
rinpol	1210.00	NIST Webbook
rinpol	1255.00	NIST Webbook
rinpol	1220.00	NIST Webbook
rinpol	1262.00	NIST Webbook
rinpol	1262.00	NIST Webbook
rinpol	1260.00	NIST Webbook
rinpol	1276.00	NIST Webbook
rinpol	1262.00	NIST Webbook
rinpol	1236.00	NIST Webbook
rinpol	1236.00	NIST Webbook
rinpol	1230.00	NIST Webbook
rinpol	1229.00	NIST Webbook
rinpol	1218.00	NIST Webbook
rinpol	1216.00	NIST Webbook
rinpol	1210.00	NIST Webbook
rinpol	1210.00	NIST Webbook
rinpol	1236.00	NIST Webbook
rinpol	1208.00	NIST Webbook
rinpol	1221.00	NIST Webbook
rinpol	1277.00	NIST Webbook
ripol	1895.00	NIST Webbook
ripol	1880.00	NIST Webbook
ripol	1898.00	NIST Webbook
ripol	1939.00	NIST Webbook
ripol	1889.00	NIST Webbook
ripol	1881.00	NIST Webbook
ripol	1916.00	NIST Webbook
ripol	1866.00	NIST Webbook
ripol	1883.00	NIST Webbook
ripol	1915.00	NIST Webbook
ripol	1943.00	NIST Webbook
ripol	1881.00	NIST Webbook
ripol	1866.00	NIST Webbook
ripol	1888.00	NIST Webbook
ripol	1883.00	NIST Webbook

ripol	1940.00	NIST Webbook
ripol	1923.00	NIST Webbook
ripol	1883.00	NIST Webbook
ripol	1946.00	NIST Webbook
ripol	1886.00	NIST Webbook
ripol	1910.00	NIST Webbook
ripol	1937.00	NIST Webbook
ripol	1915.00	NIST Webbook
ripol	1898.00	NIST Webbook
ripol	1897.00	NIST Webbook
ripol	1911.00	NIST Webbook
ripol	1867.00	NIST Webbook
ripol	1910.00	NIST Webbook
ripol	1939.00	NIST Webbook
ripol	1916.00	NIST Webbook
ripol	1916.00	NIST Webbook
ripol	1933.00	NIST Webbook
ripol	1924.00	NIST Webbook
ripol	1889.00	NIST Webbook
ripol	1919.00	NIST Webbook
ripol	1881.00	NIST Webbook
ripol	1924.00	NIST Webbook
ripol	1916.00	NIST Webbook
ripol	1881.00	NIST Webbook
ripol	1886.00	NIST Webbook
ripol	1894.00	NIST Webbook
ripol	1937.00	NIST Webbook
ripol	1878.00	NIST Webbook
ripol	1916.00	NIST Webbook
ripol	1939.00	NIST Webbook
ripol	1915.00	NIST Webbook
ripol	1950.00	NIST Webbook
ripol	1911.00	NIST Webbook
ripol	1878.00	NIST Webbook
ripol	1878.00	NIST Webbook
ripol	1883.00	NIST Webbook
ripol	1901.00	NIST Webbook
ripol	1898.00	NIST Webbook
ripol	1910.50	NIST Webbook
ripol	1907.70	NIST Webbook
ripol	1898.00	NIST Webbook
ripol	1934.00	NIST Webbook
ripol	1866.00	NIST Webbook
ripol	1946.00	NIST Webbook

ripol	1889.00		NIST Webbook
ripol	1936.00		NIST Webbook
ripol	1912.00		NIST Webbook
ripol	1912.00		NIST Webbook
ripol	1885.00		NIST Webbook
ripol	1906.00		NIST Webbook
ripol	1917.00		NIST Webbook
ripol	1910.00		NIST Webbook
ripol	1911.00		NIST Webbook
ripol	1881.00		NIST Webbook
ripol	1923.00		NIST Webbook
tb	492.49	K	Joback Method
tc	703.24	K	Joback Method
tf	285.61	K	Joback Method
vc	0.453	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	277.64	J/mol×K	492.49	Joback Method
cpg	293.06	J/mol×K	527.61	Joback Method
cpg	307.80	J/mol×K	562.74	Joback Method
cpg	321.85	J/mol×K	597.86	Joback Method
cpg	335.21	J/mol×K	632.99	Joback Method
cpg	347.89	J/mol×K	668.11	Joback Method
cpg	359.89	J/mol×K	703.24	Joback Method
hvapt	66.00	kJ/mol	298.15	Vapor pressures and enthalpies of vaporization of a series of .gamma. and .delta.-lactones by correlation gas chromatography

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Vapor pressures and enthalpies of vaporization of a series of .gamma. and .delta.-lactones by correlation gas chromatography:	https://www.doi.org/10.1016/j.jct.2014.01.016
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=C104507&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
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
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume