Cyclopentadecanone, 2-hydroxy-

Other names: 2-Hydroxy-cyclopentadecanone
Inchi: InChI=1S/C15H28O2/c16-14-12-10-8-6-4-2-1-3-5-7-9-11-13-15(14)17/h14,16H,1-13H2
InchiKey: UCPNHIPCCLLQGA-UHFFFAOYSA-N
Formula: C15H28O2
SMILES: O=C1CCCCCCCCCCCCCC1O
Mol. weight [g/mol]: 240.38
CAS: 4727-18-8

Physical Properties

Property code	Value	Unit	Source
gf	-268.44	kJ/mol	Joback Method
hf	-643.98	kJ/mol	Joback Method
hfus	11.14	kJ/mol	Joback Method
hvap	71.89	kJ/mol	Joback Method
log10ws	-4.65		Crippen Method
logp	4.001		Crippen Method
mcvol	218.790	ml/mol	McGowan Method
pc	2265.42	kPa	Joback Method
rinpol	1839.10		NIST Webbook
rinpol	1853.20		NIST Webbook
rinpol	1839.10		NIST Webbook
rinpol	1853.20		NIST Webbook
ripol	2189.00		NIST Webbook
ripol	2189.00		NIST Webbook
tb	760.58	K	Joback Method
tc	1000.42	K	Joback Method
tf	363.55	K	Joback Method
vc	0.762	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	705.04	J/mol×K	760.58	Joback Method
cpg	728.83	J/mol×K	800.55	Joback Method

cpg	750.35	J/mol×K	840.53	Joback Method
cpg	769.52	J/mol×K	880.50	Joback Method
cpg	786.26	J/mol×K	920.48	Joback Method
cpg	800.51	J/mol×K	960.45	Joback Method
cpg	812.19	J/mol×K	1000.42	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C4727188&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
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