Dihydropyran

Other names: dihydro-2H-pyran
Inchi: InChI=1S/C5H8O/c1-2-4-6-5-3-1/h2,4H,1,3,5H2
InchiKey: BUDQDWGNQVEFAC-UHFFFAOYSA-N
Formula: C5H8O
SMILES: C1=COCCC1
Mol. weight [g/mol]: 84.12
CAS: 25512-65-6

Physical Properties

Property code	Value	Unit	Source
chl	-2953.00 ± 1.00	kJ/mol	NIST Webbook
gf	-32.78	kJ/mol	Joback Method
hf	-146.09	kJ/mol	Joback Method
hfus	8.67	kJ/mol	Joback Method
hvap	32.00	kJ/mol	NIST Webbook
log10ws	-1.25		Crippen Method
logp	1.310		Crippen Method
mcvol	72.020	ml/mol	McGowan Method
pc	4869.76	kPa	Joback Method
ripol	974.00		NIST Webbook
ripol	980.00		NIST Webbook
ripol	978.00		NIST Webbook
ripol	1026.00		NIST Webbook
ripol	980.00		NIST Webbook
ripol	1000.00		NIST Webbook
tb	364.13	K	Joback Method
tc	573.37	K	Joback Method
tf	185.06	K	Joback Method
vc	0.257	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	115.35	J/mol×K	364.13	Joback Method

cpg	126.89	J/mol×K	399.00	Joback Method
cpg	137.79	J/mol×K	433.88	Joback Method
cpg	148.08	J/mol×K	468.75	Joback Method
cpg	157.79	J/mol×K	503.62	Joback Method
cpg	166.92	J/mol×K	538.49	Joback Method
cpg	175.50	J/mol×K	573.37	Joback Method
dvisc	0.0102466	Pa×s	185.06	Joback Method
dvisc	0.0039085	Pa×s	214.91	Joback Method
dvisc	0.0018859	Pa×s	244.75	Joback Method
dvisc	0.0010662	Pa×s	274.60	Joback Method
dvisc	0.0006741	Pa×s	304.44	Joback Method
dvisc	0.0004625	Pa×s	334.28	Joback Method
dvisc	0.0003376	Pa×s	364.13	Joback Method
hvapt	32.20	kJ/mol	280.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/T + C*ln(T) + D*T^2
Coeff. A	1.54163e+01
Coeff. B	-3.87061e+03
Coeff. C	-7.96193e-05
Coeff. D	1.66471e-10
Temperature range (K), min.	273.15
Temperature range (K), max.	358.15

Sources

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

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C25512656&Units=SI

KDB Vapor Pressure Data: https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1037

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

chl:	Standard liquid enthalpy of combustion
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
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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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