Ethyl radical, 1-hydroxy

Inchi: InChI=1S/C2H5O/c1-2-3/h2-3H,1H3
InchiKey: GAWIXWVDTYZWAW-UHFFFAOYSA-N
Formula: C2H5O
SMILES: C[CH]O
Mol. weight [g/mol]: 45.06
CAS: 2348-46-1

Physical Properties

Property code	Value	Unit	Source
affp	720.10	kJ/mol	NIST Webbook
basg	687.70	kJ/mol	NIST Webbook
gf	-120.92	kJ/mol	Joback Method
hf	-186.31	kJ/mol	Joback Method
hfus	3.18	kJ/mol	Joback Method
hvap	36.19	kJ/mol	Joback Method
ie	6.85	eV	NIST Webbook
ie	6.70	eV	NIST Webbook
log10ws	0.11		Crippen Method
logp	0.541		Crippen Method
mcvol	42.760	ml/mol	McGowan Method
pc	6239.25	kPa	Joback Method
tb	336.20	K	Joback Method
tc	498.81	K	Joback Method
tf	174.49	K	Joback Method
vc	0.151	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	65.62	J/mol×K	336.20	Joback Method
cpg	69.87	J/mol×K	363.30	Joback Method
cpg	73.84	J/mol×K	390.40	Joback Method
cpg	77.57	J/mol×K	417.51	Joback Method
cpg	81.05	J/mol×K	444.61	Joback Method

cpg	84.31	J/mol×K	471.71	Joback Method
cpg	87.36	J/mol×K	498.81	Joback Method
dvisc	0.0702627	Pa×s	174.49	Joback Method
dvisc	0.0176456	Pa×s	201.44	Joback Method
dvisc	0.0061401	Pa×s	228.39	Joback Method
dvisc	0.0026699	Pa×s	255.34	Joback Method
dvisc	0.0013611	Pa×s	282.30	Joback Method
dvisc	0.0007803	Pa×s	309.25	Joback Method
dvisc	0.0004891	Pa×s	336.20	Joback Method

Sources

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
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C2348461&Units=SI

Legend

affp:	Proton affinity
basg:	Gas basicity
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
ie:	Ionization energy
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

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