Hydroxymethyl radical

Inchi: InChI=1S/CH3O/c1-2/h2H,1H2
InchiKey: CBOIHMRHGLHBPB-UHFFFAOYSA-N
Formula: CH3O
SMILES: [CH2]O
Mol. weight [g/mol]: 31.03
CAS: 2597-43-5

Physical Properties

Property code	Value	Unit	Source
affp	695.00	kJ/mol	NIST Webbook
basg	662.50	kJ/mol	NIST Webbook
gf	-126.90	kJ/mol	Joback Method
hf	-9.00 ± 4.00	kJ/mol	NIST Webbook
hfpi	718.00 ± 2.00	kJ/mol	NIST Webbook
hfus	4.12	kJ/mol	Joback Method
hvap	34.35	kJ/mol	Joback Method
ie	7.56 ± 0.01	eV	NIST Webbook
ie	7.56 ± 0.02	eV	NIST Webbook
ie	8.14 ± 0.01	eV	NIST Webbook
ie	8.14 ± 0.15	eV	NIST Webbook
ie	7.60	eV	NIST Webbook
ie	7.56 ± 0.00	eV	NIST Webbook
ie	7.55 ± 0.01	eV	NIST Webbook
log10ws	0.53		Crippen Method
logp	0.150		Crippen Method
mcvol	28.670	ml/mol	McGowan Method
pc	7206.25	kPa	Joback Method
tb	313.76	K	Joback Method
tc	471.75	K	Joback Method
tf	178.22	K	Joback Method
vc	0.102	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	38.13	J/mol×K	313.76	Joback Method
cpg	40.73	J/mol×K	340.09	Joback Method
cpg	43.12	J/mol×K	366.42	Joback Method
cpg	45.33	J/mol×K	392.76	Joback Method
cpg	47.35	J/mol×K	419.09	Joback Method
cpg	49.21	J/mol×K	445.42	Joback Method
cpg	50.92	J/mol×K	471.75	Joback Method
dvisc	0.0259356	Pa×s	178.22	Joback Method
dvisc	0.0090382	Pa×s	200.81	Joback Method
dvisc	0.0038981	Pa×s	223.40	Joback Method
dvisc	0.0019620	Pa×s	245.99	Joback Method
dvisc	0.0011084	Pa×s	268.58	Joback Method
dvisc	0.0006842	Pa×s	291.17	Joback Method
dvisc	0.0004527	Pa×s	313.76	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C2597435&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
McGowan Method: http://link.springer.com/article/10.1007/BF02311772

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
hfpi: Enthalpy of formation of positive ion 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