Methyl radical, hydroxy-d1-

Inchi: InChI=1S/CH3O/c1-2/h2H,1H2/i2D
InchiKey: CBOIHMRHGLHBPB-VMNATFBRSA-N
Formula: CH2DO
SMILES: [CH2]O
Mol. weight [g/mol]: 32.04
CAS: 58456-46-5

Physical Properties

Property code	Value	Unit	Source
gf	-126.90	kJ/mol	Joback Method
hf	-160.39	kJ/mol	Joback Method
hfus	4.12	kJ/mol	Joback Method
hvap	34.35	kJ/mol	Joback Method
ie	7.55 ± 0.01	eV	NIST Webbook
ie	7.55 ± 0.02	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

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C58456465&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
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