Methylene

Inchi: InChI=1S/CH2/h1H2
InchiKey: HZVOZRGWRWCICA-UHFFFAOYSA-N
Formula: CH2
SMILES: [CH2]
Mol. weight [g/mol]: 14.03
CAS: 2465-56-7

Physical Properties

Property code	Value	Unit	Source
ea	0.90 ± 0.40	eV	NIST Webbook
ea	0.21 ± 0.03	eV	NIST Webbook
ea	0.21 ± 0.01	eV	NIST Webbook
ea	0.60 ± 0.03	eV	NIST Webbook
ea	0.65 ± 0.01	eV	NIST Webbook
gf	62.30	kJ/mol	Joback Method
hf	47.65	kJ/mol	Joback Method
hfpi	1370.00 ± 10.00	kJ/mol	NIST Webbook
hfpiz	1380.00 ± 10.00	kJ/mol	NIST Webbook
hfus	1.71	kJ/mol	Joback Method
hvap	17.53	kJ/mol	Joback Method
ie	10.35 ± 0.15	eV	NIST Webbook
ie	10.40 ± 0.00	eV	NIST Webbook
ie	10.50 ± 0.20	eV	NIST Webbook
ie	10.40 ± 0.00	eV	NIST Webbook
log10ws	0.20		Crippen Method
logp	0.327		Crippen Method
mcvol	20.650	ml/mol	McGowan Method
pc	6653.02	kPa	Joback Method
tb	220.88	K	Joback Method
tc	366.98	K	Joback Method
tf	133.77	K	Joback Method
vc	0.073	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	9.15	J/mol×K	220.88	Joback Method
cpg	22.14	J/mol×K	342.63	Joback Method
cpg	20.14	J/mol×K	318.28	Joback Method
cpg	17.86	J/mol×K	293.93	Joback Method
cpg	15.28	J/mol×K	269.58	Joback Method
cpg	12.38	J/mol×K	245.23	Joback Method
cpg	23.88	J/mol×K	366.98	Joback Method
dvisc	0.0000160	Pa×s	220.88	Joback Method
dvisc	0.0000137	Pa×s	206.36	Joback Method
dvisc	0.0000114	Pa×s	191.84	Joback Method
dvisc	0.0000092	Pa×s	177.32	Joback Method
dvisc	0.0000071	Pa×s	162.81	Joback Method
dvisc	0.0000053	Pa×s	148.29	Joback Method
dvisc	0.0000036	Pa×s	133.77	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=C2465567&Units=SI

Legend

cpg: Ideal gas heat capacity
dvisc: Dynamic viscosity
ea: Electron affinity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions
hfpi: Enthalpy of formation of positive ion at standard conditions
hfpiz: Enthalpy of formation of positive ion at 0K
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