CH2CHO

Inchi: InChI=1S/C2H3O/c1-2-3/h2H,1H2
InchiKey: FATAVLOOLIRUNA-UHFFFAOYSA-N
Formula: C2H3O
SMILES: [CH2]C=O
Mol. weight [g/mol]: 43.04
CAS: 4400-01-5

Physical Properties

Property code	Value	Unit	Source
affp	774.00	kJ/mol	NIST Webbook
basg	741.50	kJ/mol	NIST Webbook
ea	1.81 ± 0.06	eV	NIST Webbook
ea	1.82 ± 0.01	eV	NIST Webbook
ea	1.79 ± 0.01	eV	NIST Webbook
ea	1.82 ± 0.02	eV	NIST Webbook
ea	1.82	eV	NIST Webbook
ea	1.82 ± 0.01	eV	NIST Webbook
gf	-81.18	kJ/mol	Joback Method
hf	-114.38	kJ/mol	Joback Method
hfus	4.91	kJ/mol	Joback Method
hvap	26.62	kJ/mol	Joback Method
log10ws	0.45		Crippen Method
logp	0.019		Crippen Method
mcvol	38.460	ml/mol	McGowan Method
pc	5990.66	kPa	Joback Method
tb	293.12	K	Joback Method
tc	461.18	K	Joback Method
tf	170.67	K	Joback Method
vc	0.155	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	50.09	J/mol×K	293.12	Joback Method

cpg	53.73	J/mol×K	321.13	Joback Method
cpg	57.10	J/mol×K	349.14	Joback Method
cpg	60.21	J/mol×K	377.15	Joback Method
cpg	63.09	J/mol×K	405.16	Joback Method
cpg	65.75	J/mol×K	433.17	Joback Method
cpg	68.21	J/mol×K	461.18	Joback Method
dvisc	0.0003486	Pa×s	170.67	Joback Method
dvisc	0.0003005	Pa×s	191.08	Joback Method
dvisc	0.0002666	Pa×s	211.49	Joback Method
dvisc	0.0002415	Pa×s	231.90	Joback Method
dvisc	0.0002223	Pa×s	252.30	Joback Method
dvisc	0.0002072	Pa×s	272.71	Joback Method
dvisc	0.0001950	Pa×s	293.12	Joback Method

Sources

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=C4400015&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Legend

affp: Proton affinity
basg: Gas basicity
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
hfus: Enthalpy of fusion at standard conditions
hvap: Enthalpy of vaporization at standard conditions
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