Cyclopropyl radical

Inchi: InChI=1S/C3H5/c1-2-3-1/h1H,2-3H2
InchiKey: XIPUIGPNIDKXJU-UHFFFAOYSA-N
Formula: C3H5
SMILES: [CH]1CC1
Mol. weight [g/mol]: 41.07
CAS: 2417-82-5

Physical Properties

Property code	Value	Unit	Source
affp	738.90	kJ/mol	NIST Webbook
basg	702.00	kJ/mol	NIST Webbook
ea	0.36 ± 0.09	eV	NIST Webbook
ea	0.51 ± 0.21	eV	NIST Webbook
ea	0.40 ± 0.07	eV	NIST Webbook
gf	87.51	kJ/mol	Joback Method
hf	23.36	kJ/mol	Joback Method
hfpi	1070.00	kJ/mol	NIST Webbook
hfus	3.34	kJ/mol	Joback Method
hvap	22.04	kJ/mol	Joback Method
ie	8.18 ± 0.03	eV	NIST Webbook
ie	8.68 ± 0.02	eV	NIST Webbook
log10ws	-0.58		Crippen Method
logp	0.984		Crippen Method
mcvol	40.120	ml/mol	McGowan Method
pc	5636.27	kPa	Joback Method
tb	274.08	K	Joback Method
tc	446.36	K	Joback Method
tf	157.88	K	Joback Method
vc	0.151	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	40.47	J/mol×K	274.08	Joback Method

cpg	74.24	J/mol×K	417.65	Joback Method
cpg	68.53	J/mol×K	388.93	Joback Method
cpg	62.33	J/mol×K	360.22	Joback Method
cpg	55.61	J/mol×K	331.51	Joback Method
cpg	48.33	J/mol×K	302.79	Joback Method
cpg	79.49	J/mol×K	446.36	Joback Method
dvisc	0.0001003	Pa×s	274.08	Joback Method
dvisc	0.0000903	Pa×s	254.71	Joback Method
dvisc	0.0000800	Pa×s	235.35	Joback Method
dvisc	0.0000693	Pa×s	215.98	Joback Method
dvisc	0.0000583	Pa×s	196.61	Joback Method
dvisc	0.0000473	Pa×s	177.25	Joback Method
dvisc	0.0000364	Pa×s	157.88	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C2417825&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
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
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