Cyclopentyl radical

Inchi: InChI=1S/C5H9/c1-2-4-5-3-1/h1H,2-5H2
InchiKey: BQOWUDKEXDCGQS-UHFFFAOYSA-N
Formula: C5H9
SMILES: [CH]1CCCC1
Mol. weight [g/mol]: 69.12
CAS: 3889-74-5

Physical Properties

Property code	Value	Unit	Source
ea	-0.27 ± 0.11	eV	NIST Webbook
gf	80.15	kJ/mol	Joback Method
hf	-30.24	kJ/mol	Joback Method
hfus	4.32	kJ/mol	Joback Method
hvap	26.83	kJ/mol	Joback Method
ie	7.21	eV	NIST Webbook
ie	7.79 ± 0.03	eV	NIST Webbook
ie	7.47	eV	NIST Webbook
ie	7.47	eV	NIST Webbook
log10ws	-1.42		Crippen Method
logp	1.765		Crippen Method
mcvol	68.300	ml/mol	McGowan Method
pc	4602.62	kPa	Joback Method
tb	328.38	K	Joback Method
tc	519.88	K	Joback Method
tf	173.38	K	Joback Method
vc	0.247	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	95.87	J/mol×K	328.38	Joback Method
cpg	149.66	J/mol×K	487.96	Joback Method
cpg	140.26	J/mol×K	456.05	Joback Method
cpg	130.22	J/mol×K	424.13	Joback Method

cpg	119.50	J/mol×K	392.21	Joback Method
cpg	108.06	J/mol×K	360.30	Joback Method
cpg	158.46	J/mol×K	519.88	Joback Method
dvisc	0.0002796	Pa×s	328.38	Joback Method
dvisc	0.0002974	Pa×s	302.55	Joback Method
dvisc	0.0003201	Pa×s	276.71	Joback Method
dvisc	0.0003497	Pa×s	250.88	Joback Method
dvisc	0.0003900	Pa×s	225.05	Joback Method
dvisc	0.0004473	Pa×s	199.21	Joback Method
dvisc	0.0005344	Pa×s	173.38	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C3889745&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

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
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