2-Butyl radical

Inchi: InChI=1S/C4H9/c1-3-4-2/h3H,4H2,1-2H3
InchiKey: ULOIAOPTGWSNHU-UHFFFAOYSA-N
Formula: C4H9
SMILES: C[CH]CC
Mol. weight [g/mol]: 57.11
CAS: 2348-55-2

Physical Properties

Property code	Value	Unit	Source
ea	-0.13 ± 0.09	eV	NIST Webbook
gf	32.74	kJ/mol	Joback Method
hf	69.00 ± 2.00	kJ/mol	NIST Webbook
hfpi	766.00 ± 4.00	kJ/mol	NIST Webbook
hfus	4.27	kJ/mol	Joback Method
hvap	23.96	kJ/mol	Joback Method
ie	7.59 ± 0.03	eV	NIST Webbook
ie	7.41 ± 0.05	eV	NIST Webbook
ie	7.25 ± 0.02	eV	NIST Webbook
log10ws	-1.11		Crippen Method
logp	1.621		Crippen Method
mcvol	65.070	ml/mol	McGowan Method
pc	4162.33	kPa	Joback Method
tb	289.78	K	Joback Method
tc	451.90	K	Joback Method
tf	136.21	K	Joback Method
vc	0.244	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	89.53	J/mol×K	289.78	Joback Method
cpg	124.64	J/mol×K	424.88	Joback Method
cpg	118.33	J/mol×K	397.86	Joback Method
cpg	111.68	J/mol×K	370.84	Joback Method

cpg	104.68	J/mol×K	343.82	Joback Method
cpg	97.30	J/mol×K	316.80	Joback Method
cpg	130.63	J/mol×K	451.90	Joback Method
dvisc	0.0001712	Pa×s	289.78	Joback Method
dvisc	0.0001875	Pa×s	264.19	Joback Method
dvisc	0.0002092	Pa×s	238.59	Joback Method
dvisc	0.0002398	Pa×s	213.00	Joback Method
dvisc	0.0002853	Pa×s	187.40	Joback Method
dvisc	0.0003585	Pa×s	161.81	Joback Method
dvisc	0.0004910	Pa×s	136.21	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C2348552&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
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