

1,4-Pentadien-3-yl radical

Inchi:	InChI=1S/C5H7/c1-3-5-4-2/h3-5H,1-2H2
InchiKey:	DVOOWDFPPNOBFV-UHFFFAOYSA-N
Formula:	C5H7
SMILES:	C=C[CH]C=C
Mol. weight [g/mol]:	67.11
CAS:	14362-08-4

Physical Properties

Property code	Value	Unit	Source
gf	216.84	kJ/mol	Joback Method
hf	154.86	kJ/mol	Joback Method
hfus	4.30	kJ/mol	Joback Method
hvap	24.85	kJ/mol	Joback Method
ie	7.25	eV	NIST Webbook
ie	7.76	eV	NIST Webbook
log10ws	-1.23		Crippen Method
logp	1.563		Crippen Method
mcvol	70.560	ml/mol	McGowan Method
pc	4098.62	kPa	Joback Method
tb	306.02	K	Joback Method
tc	476.42	K	Joback Method
tf	143.96	K	Joback Method
vc	0.263	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	96.13	J/molxK	306.02	Joback Method
cpg	104.18	J/molxK	334.42	Joback Method
cpg	111.73	J/molxK	362.82	Joback Method
cpg	118.80	J/molxK	391.22	Joback Method
cpg	125.41	J/molxK	419.62	Joback Method
cpg	131.61	J/molxK	448.02	Joback Method
cpg	137.40	J/molxK	476.42	Joback Method

dvisc	0.0004347	Paxs	143.96	Joback Method
dvisc	0.0003360	Paxs	170.97	Joback Method
dvisc	0.0002786	Paxs	197.98	Joback Method
dvisc	0.0002417	Paxs	224.99	Joback Method
dvisc	0.0002161	Paxs	252.00	Joback Method
dvisc	0.0001975	Paxs	279.01	Joback Method
dvisc	0.0001834	Paxs	306.02	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=C14362084&Units=SI

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
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

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