Tetracyclo[5.3.0.02,6.03,10]deca-4,8-diene

Other names: Tetracyclo[4.2.1.1(2,5).0(9,10)]deca-3,7-diene
Inchi: InChI=1S/C10H10/c1-2-6-8-4-3-7-5(1)9(6)10(7)8/h1-10H
InchiKey: JWORPRNWDWIHCA-UHFFFAOYSA-N
Formula: C10H10
SMILES: C1=CC2C3C=CC4C1C2C43
Mol. weight [g/mol]: 130.19
CAS: 34324-40-8

Physical Properties

Property code	Value	Unit	Source
gf	345.02	kJ/mol	Joback Method
hf	128.67	kJ/mol	Joback Method
hfus	22.98	kJ/mol	Joback Method
hvap	37.13	kJ/mol	Joback Method
ie	8.44	eV	NIST Webbook
log10ws	-1.84		Crippen Method
logp	1.850		Crippen Method
mcvol	99.720	ml/mol	McGowan Method
pc	3452.08	kPa	Joback Method
tb	435.60	K	Joback Method
tc	645.28	K	Joback Method
tf	274.30	K	Joback Method
vc	0.409	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	230.53	J/mol×K	435.60	Joback Method
cpg	247.99	J/mol×K	470.55	Joback Method
cpg	263.93	J/mol×K	505.49	Joback Method
cpg	278.46	J/mol×K	540.44	Joback Method
cpg	291.73	J/mol×K	575.39	Joback Method
cpg	303.85	J/mol×K	610.33	Joback Method
cpg	314.98	J/mol×K	645.28	Joback Method

dvisc	0.0001747	Pa×s	274.30	Joback Method
dvisc	0.0003267	Pa×s	301.18	Joback Method
dvisc	0.0005517	Pa×s	328.07	Joback Method
dvisc	0.0008603	Pa×s	354.95	Joback Method
dvisc	0.0012603	Pa×s	381.83	Joback Method
dvisc	0.0017559	Pa×s	408.72	Joback Method
dvisc	0.0023482	Pa×s	435.60	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C34324408&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