Tetracyclo[3.3.2.02,4.06,8.]dec-9-ene (1«alpha»,2«alpha»,3«beta»,5«beta»,6«alpha»,7«a

Inchi: InChI=1S/C10H12/c1-2-6-9-3-7(9)5(1)8-4-10(6)8/h1-2,5-10H,3-4H2/t5?,6?,7-,8-,9+,10+
InchiKey: XBVRONSHRYAOJQ-WKYLOALWSA-N
Formula: C10H12
SMILES: C1=CC2C3CC3C1C1CC21
Mol. weight [g/mol]: 132.20
CAS: 27335-51-9

Physical Properties

Property code	Value	Unit	Source
gf	315.06	kJ/mol	Joback Method
hf	70.89	kJ/mol	Joback Method
hfus	21.76	kJ/mol	Joback Method
hvap	36.84	kJ/mol	Joback Method
ie	8.64	eV	NIST Webbook
ie	8.40	eV	NIST Webbook
log10ws	-1.99		Crippen Method
logp	2.074		Crippen Method
mcvol	104.020	ml/mol	McGowan Method
pc	3310.55	kPa	Joback Method
tb	436.44	K	Joback Method
tc	643.95	K	Joback Method
tf	273.54	K	Joback Method
vc	0.423	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	244.85	J/mol×K	436.44	Joback Method
cpg	324.20	J/mol×K	609.37	Joback Method
cpg	310.91	J/mol×K	574.78	Joback Method
cpg	296.46	J/mol×K	540.20	Joback Method
cpg	280.72	J/mol×K	505.61	Joback Method
cpg	263.56	J/mol×K	471.03	Joback Method
cpg	336.45	J/mol×K	643.95	Joback Method

dvisc	0.0024718	Pa×s	436.44	Joback Method
dvisc	0.0018718	Pa×s	409.29	Joback Method
dvisc	0.0013626	Pa×s	382.14	Joback Method
dvisc	0.0009449	Pa×s	354.99	Joback Method
dvisc	0.0006167	Pa×s	327.84	Joback Method
dvisc	0.0003726	Pa×s	300.69	Joback Method
dvisc	0.0002037	Pa×s	273.54	Joback Method

Sources

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=C27335519&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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