Naphthalene, 1,4,5,8-tetrahydro-

Other names:	Isotetralin
	1,4,5,8-Tetrahydronaphthalene
	Napthhalene,1,4,5,8-tetrahydro-
Inchi:	InChI=1S/C10H12/c1-2-6-10-8-4-3-7-9(10)5-1/h1-4H,5-8H2
InchiKey:	FSWYUDLVKBSHDX-UHFFFAOYSA-N
Formula:	C10H12
SMILES:	C1=CCC2=C(C1)CC=CC2
Mol. weight [g/mol]:	132.20
CAS:	493-04-9

Physical Properties

Property code	Value	Unit	Source
gf	192.46	kJ/mol	Joback Method
hf	62.31	kJ/mol	Joback Method
hfus	10.27	kJ/mol	Joback Method
hvap	41.19	kJ/mol	Joback Method
ie	8.27	eV	NIST Webbook
ie	8.20	eV	NIST Webbook
log10ws	-3.36		Crippen Method
logp	2.983		Crippen Method
mcvol	117.140	ml/mol	McGowan Method
pc	3568.53	kPa	Joback Method
rinpol	1179.00		NIST Webbook
rinpol	1189.00		NIST Webbook
rinpol	1179.00		NIST Webbook
rinpol	1205.00		NIST Webbook
rinpol	1205.00		NIST Webbook
rinpol	1217.00		NIST Webbook
rinpol	1179.00		NIST Webbook
tb	475.54	K	Joback Method
tc	708.10	K	Joback Method
tf	260.06	K	Joback Method
vc	0.438	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	241.23	J/mol×K	475.54	Joback Method
cpg	257.83	J/mol×K	514.30	Joback Method
cpg	273.25	J/mol×K	553.06	Joback Method
cpg	287.54	J/mol×K	591.82	Joback Method
cpg	300.80	J/mol×K	630.58	Joback Method
cpg	313.07	J/mol×K	669.34	Joback Method
cpg	324.45	J/mol×K	708.10	Joback Method
dvisc	0.0025839	Pa×s	260.06	Joback Method
dvisc	0.0014903	Pa×s	295.97	Joback Method
dvisc	0.0009683	Pa×s	331.89	Joback Method
dvisc	0.0006844	Pa×s	367.80	Joback Method
dvisc	0.0005146	Pa×s	403.71	Joback Method
dvisc	0.0004053	Pa×s	439.63	Joback Method
dvisc	0.0003310	Pa×s	475.54	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C493049&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
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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume