1,4-Methanonaphthalene, 1,4-dihydro-

Other names:	Benzonorbornadiene
	1,4-Dihydro-1,4-methanonaphthalene
Inchi:	InChI=1S/C11H10/c1-2-4-11-9-6-5-8(7-9)10(11)3-1/h1-6,8-9H,7H2
InchiKey:	IEGYXSAHRKJELM-UHFFFAOYSA-N
Formula:	C11H10
SMILES:	C1=CC2CC1c1ccccc12
Mol. weight [g/mol]:	142.20
CAS:	4453-90-1

Physical Properties

Property code	Value	Unit	Source
gf	308.08	kJ/mol	Joback Method
hf	164.23	kJ/mol	Joback Method
hfus	17.49	kJ/mol	Joback Method
hvap	42.96	kJ/mol	Joback Method
ie	8.32 ± 0.05	eV	NIST Webbook
ie	8.34 ± 0.05	eV	NIST Webbook
ie	8.34	eV	NIST Webbook
ie	8.34	eV	NIST Webbook
ie	8.30 ± 0.05	eV	NIST Webbook
log10ws	-3.07		Crippen Method
logp	2.827		Crippen Method
mcvol	116.070	ml/mol	McGowan Method
pc	3513.74	kPa	Joback Method
tb	491.11	K	Joback Method
tc	722.56	K	Joback Method
tf	292.83	K	Joback Method
vc	0.452	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	255.76	J/mol×K	491.11	Joback Method
cpg	322.20	J/mol×K	683.98	Joback Method

cpg	311.12	J/mol×K	645.41	Joback Method
cpg	299.05	J/mol×K	606.83	Joback Method
cpg	285.89	J/mol×K	568.26	Joback Method
cpg	271.50	J/mol×K	529.68	Joback Method
cpg	332.43	J/mol×K	722.56	Joback Method
dvisc	0.0009547	Pa×s	491.11	Joback Method
dvisc	0.0009530	Pa×s	458.06	Joback Method
dvisc	0.0009509	Pa×s	425.02	Joback Method
dvisc	0.0009486	Pa×s	391.97	Joback Method
dvisc	0.0009458	Pa×s	358.92	Joback Method
dvisc	0.0009425	Pa×s	325.88	Joback Method
dvisc	0.0009385	Pa×s	292.83	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C4453901&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
McGowan Method: http://link.springer.com/article/10.1007/BF02311772

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