1(2H)-Naphthalenone, 3,4-dihydro-

Other names:	«alpha»-Tetralone
	1-Tetralone
	1,2,3,4-Tetrahydronaphthalen-1-one
	3,4-Dihydro-1(2H)-naphthalenone
	3,4-Dihydro-2H-naphthalen-1-one
	3,4-Dihydro-1(2H)-naphthaleneone
	1,2,3,4-Tetrahydro-1-naphthalenone
	1-Oxotetralin
	1-Oxo-1,2,3,4-tetrahydronaphthalene
	alpha-Tetralone
	1,2,3,4-Tetrahydro-1-oxonaphthalene
	3,4-Dihydronaphthalen-1(2H)-one
	NSC 5171
Inchi:	InChI=1S/C10H10O/c11-10-7-3-5-8-4-1-2-6-9(8)10/h1-2,4,6H,3,5,7H2
InchiKey:	XHLHPRDBBAGVEG-UHFFFAOYSA-N
Formula:	C10H10O
SMILES:	O=C1CCCc2ccccc21
Mol. weight [g/mol]:	146.19
CAS:	529-34-0

Physical Properties

Property code	Value	Unit	Source
chs	-5154.70	kJ/mol	NIST Webbook
gf	69.87	kJ/mol	Joback Method
hf	-75.39	kJ/mol	Joback Method
hfus	9.78	kJ/mol	Joback Method
hvap	65.00 ± 0.30	kJ/mol	NIST Webbook
log10ws	-2.83		Crippen Method
logp	2.206		Crippen Method
mcvol	118.710	ml/mol	McGowan Method
pc	3722.56	kPa	Joback Method
rinpol	1458.00		NIST Webbook
tb	531.15	K	NIST Webbook
tc	792.93	K	Joback Method
tf	278.80 ± 1.00	K	NIST Webbook
vc	0.445	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	268.39	J/mol×K	543.36	Joback Method
cpg	283.94	J/mol×K	584.96	Joback Method
cpg	298.44	J/mol×K	626.55	Joback Method
cpg	311.91	J/mol×K	668.15	Joback Method
cpg	324.40	J/mol×K	709.74	Joback Method
cpg	335.96	J/mol×K	751.34	Joback Method
cpg	346.61	J/mol×K	792.93	Joback Method
hvapt	61.50	kJ/mol	461.50	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	388.20	K	0.80	NIST Webbook

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=C529340&Units=SI

Legend

chs: Standard solid enthalpy of combustion
cpg: Ideal gas heat capacity
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
hvapt:	Enthalpy of vaporization at a given temperature
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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume