

1,2,3,4-Tetrahydronaphthalene-d12

Inchi:	InChI=1S/C10H12/c1-2-6-10-8-4-3-7-9(10)5-1/h1-2,5-6H,3-4,7-8H2/i1D,2D,3D2,4D2,5D,
InchiKey:	CXWXQJXEFPUDZ-DTOGOBKCSA-N
Formula:	C10D12
SMILES:	c1ccc2c(c1)CCCC2
Mol. weight [g/mol]:	144.28
CAS:	75840-23-2

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
log10ws	-2.97		Crippen Method
logp	2.565		Crippen Method
mcvol	117.140	ml/mol	McGowan Method
pc	3568.53	kPa	Joback Method
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

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=C75840232&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
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

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