

4-Hydroxy-1-naphthaldehyde

Other names:	4-Hydroxy-naphthaldehyde
Inchi:	InChI=1S/C11H8O2/c12-7-8-5-6-11(13)10-4-2-1-3-9(8)10/h1-7,13H
InchiKey:	LORPDGZOLAPNHP-UHFFFAOYSA-N
Formula:	C11H8O2
SMILES:	O=Cc1ccc(O)c2ccccc12
Mol. weight [g/mol]:	172.18
CAS:	7770-45-8

Physical Properties

Property code	Value	Unit	Source
gf	-2.97	kJ/mol	Joback Method
hf	-117.13	kJ/mol	Joback Method
hfus	22.99	kJ/mol	Joback Method
hvap	64.39	kJ/mol	Joback Method
log10ws	-3.07		Crippen Method
logp	2.358		Crippen Method
mcvol	130.070	ml/mol	McGowan Method
pc	4504.30	kPa	Joback Method
tb	631.00	K	Joback Method
tc	878.73	K	Joback Method
tf	439.09	K	Joback Method
vc	0.449	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	313.19	J/mol×K	631.00	Joback Method
cpg	323.68	J/mol×K	672.29	Joback Method
cpg	333.30	J/mol×K	713.58	Joback Method
cpg	342.19	J/mol×K	754.86	Joback Method
cpg	350.50	J/mol×K	796.15	Joback Method
cpg	358.36	J/mol×K	837.44	Joback Method
cpg	365.92	J/mol×K	878.73	Joback Method
dvisc	0.0007964	Paxs	439.09	Joback Method

dvisc	0.0004469	Paxs	471.08	Joback Method
dvisc	0.0002699	Paxs	503.06	Joback Method
dvisc	0.0001731	Paxs	535.05	Joback Method
dvisc	0.0001168	Paxs	567.03	Joback Method
dvisc	0.0000821	Paxs	599.01	Joback Method
dvisc	0.0000599	Paxs	631.00	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=C7770458&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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