Acenaphthene-d10

Other names: Acenaphthene-d
Acenaphthylene-d8, 1,2-dihydro-d2
[2H10]Acenaphthene
Inchi: InChI=1S/C12H10/c1-3-9-4-2-6-11-8-7-10(5-1)12(9)11/h1-6H,7-8H2/i1D,2D,3D,4D,5D,6D
InchiKey: CWRYPZZKDGJXCA-WHUVPORUSA-N
Formula: C12D10
SMILES: c1cc2c3c(cccc3c1)CC2
Mol. weight [g/mol]: 164.27
CAS: 15067-26-2

Physical Properties

Property code	Value	Unit	Source
gf	330.52	kJ/mol	Joback Method
hf	212.95	kJ/mol	Joback Method
hfus	16.28	kJ/mol	Joback Method
hvap	67.20	kJ/mol	NIST Webbook
log10ws	-3.94		Crippen Method
logp	2.938		Crippen Method
mcvol	125.860	ml/mol	McGowan Method
pc	3517.91	kPa	Joback Method
rinpol	1478.00		NIST Webbook
rinpol	1478.00		NIST Webbook
rinpol	253.80		NIST Webbook
rinpol	253.80		NIST Webbook
ripol	2119.00		NIST Webbook
tb	536.72	K	Joback Method
tc	777.86	K	Joback Method
tf	334.86	K	Joback Method
vc	0.487	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	349.39	J/mol×K	777.86	Joback Method

cpg	280.00	J/mol×K	536.72	Joback Method
cpg	294.23	J/mol×K	576.91	Joback Method
cpg	307.22	J/mol×K	617.10	Joback Method
cpg	319.10	J/mol×K	657.29	Joback Method
cpg	329.99	J/mol×K	697.48	Joback Method
cpg	340.05	J/mol×K	737.67	Joback Method
dvisc	0.0007316	Pa×s	536.72	Joback Method
dvisc	0.0014227	Pa×s	334.86	Joback Method
dvisc	0.0012105	Pa×s	368.50	Joback Method
dvisc	0.0010583	Pa×s	402.15	Joback Method
dvisc	0.0009445	Pa×s	435.79	Joback Method
dvisc	0.0008569	Pa×s	469.43	Joback Method
dvisc	0.0007876	Pa×s	503.08	Joback Method
hvapt	67.21	kJ/mol	298.00	Enthalpies of Vaporization and Vapor Pressures of Some Deuterated Hydrocarbons. Liquid-Vapor Pressure Isotope Effects

Sources

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Enthalpies of Vaporization and Vapor Pressures of Some Deuterated Hydrocarbons. Liquid-Vapor Pressure Isotope Effects: https://www.doi.org/10.1021/je800091s

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=C15067262&Units=SI

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

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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume