9H-Fluoren-9-ol

Other names:	9-fluorenol
	9-hydroxyfluorene
	9H-Fluorene-9-ol
	Diphenylene carbinol
	Fluoren-9-ol
	Fluorenol
Inchi:	InChI=1S/C13H10O/c14-13-11-7-3-1-5-9(11)10-6-2-4-8-12(10)13/h1-8,13-14H
InchiKey:	AFMVESZOYKHDBJ-UHFFFAOYSA-N
Formula:	C13H10O
SMILES:	OC1c2ccccc2-c2ccccc21
Mol. weight [g/mol]:	182.22
CAS:	1689-64-1

Physical Properties

Property code	Value	Unit	Source
gf	212.27	kJ/mol	Joback Method
hf	71.36	kJ/mol	Joback Method
hfus	24.20	kJ/mol	Experimental and Computational Study of the Thermodynamic Properties of 9-Fluorenone and 9-Fluorenol
hvap	66.66	kJ/mol	Joback Method
log10ws	-4.14		Crippen Method
logp	2.749		Crippen Method
mcvol	141.520	ml/mol	McGowan Method
pc	3620.24	kPa	Joback Method
rinpol	1791.00		NIST Webbook
rinpol	1704.00		NIST Webbook
rinpol	280.50		NIST Webbook
rinpol	280.50		NIST Webbook
rinpol	1791.00		NIST Webbook
ripol	2473.00		NIST Webbook
tb	650.54	K	Joback Method
tc	876.67	K	Joback Method
tf	427.60 ± 2.00	K	NIST Webbook
vc	0.539	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	357.87	J/mol×K	650.54	Joback Method
cpg	369.52	J/mol×K	688.23	Joback Method
cpg	380.30	J/mol×K	725.92	Joback Method
cpg	390.30	J/mol×K	763.60	Joback Method
cpg	399.63	J/mol×K	801.29	Joback Method
cpg	408.38	J/mol×K	838.98	Joback Method
cpg	416.67	J/mol×K	876.67	Joback Method
dvisc	0.0013355	Pa×s	441.72	Joback Method
dvisc	0.0022872	Pa×s	399.95	Joback Method
dvisc	0.0008557	Pa×s	483.48	Joback Method
dvisc	0.0005886	Pa×s	525.25	Joback Method
dvisc	0.0004277	Pa×s	567.01	Joback Method
dvisc	0.0003248	Pa×s	608.77	Joback Method
dvisc	0.0002555	Pa×s	650.54	Joback Method
hvapt	50.40	kJ/mol	435.00	NIST Webbook
hvapt	49.70	kJ/mol	465.00	NIST Webbook
hvapt	48.90	kJ/mol	505.00	NIST Webbook
psub	2.10e-05	kPa	326.10	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique
psub	2.44e-05	kPa	327.50	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique

psub	3.15e-05	kPa	329.80	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique	
psub	3.74e-05	kPa	331.30	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique	
psub	5.12e-05	kPa	334.90	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique	
psub	1.01e-04	kPa	340.90	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique	
psub	1.15e-04	kPa	342.60	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique	

psub	1.23e-04	kPa	343.60	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique	
psub	1.44e-04	kPa	344.70	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique	
psub	1.59e-04	kPa	346.10	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique	
psub	1.86e-04	kPa	347.40	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique	
psub	2.76e-04	kPa	351.20	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique	

psub	4.02e-04	kPa	355.10	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique
psub	5.60e-04	kPa	358.70	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique
psub	7.40e-04	kPa	361.90	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique
psub	1.03e-03	kPa	366.10	Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Vapor pressures and sublimation enthalpies of seven heteroatomic aromatic hydrocarbons measured using the Knudsen effusion technique:	https://www.doi.org/10.1016/j.jct.2010.01.014
Experimental and Computational Study of the Thermodynamic Properties of 9-Fluorenone and 9-Fluorenol :	https://www.doi.org/10.1021/je300584m
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=C1689641&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
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
psub:	Sublimation 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

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