9-Ethylfluorene

Other names: 9-ethyl-9H-fluorene
9H-Fluorene, 9-ethyl-
Inchi: InChI=1S/C15H14/c1-2-11-12-7-3-5-9-14(12)15-10-6-4-8-13(11)15/h3-11H,2H2,1H3
InchiKey: QBBCCEYJCKGWIK-UHFFFAOYSA-N
Formula: C15H14
SMILES: CCC1c2ccccc2-c2ccccc21
Mol. weight [g/mol]: 194.27
CAS: 2294-82-8

Physical Properties

Property code	Value	Unit	Source
gf	365.93	kJ/mol	Joback Method
hf	182.31	kJ/mol	Joback Method
hfus	24.25	kJ/mol	Joback Method
hvap	54.43	kJ/mol	Joback Method
log10ws	-5.22		Crippen Method
logp	4.209		Crippen Method
mcvol	163.830	ml/mol	McGowan Method
pc	2640.67	kPa	Joback Method
rinpol	284.99		NIST Webbook
rinpol	1674.00		NIST Webbook
rinpol	284.99		NIST Webbook
rinpol	1674.00		NIST Webbook
rinpol	284.99		NIST Webbook
tb	604.12	K	Joback Method
tc	841.51	K	Joback Method
tf	361.67	K	Joback Method
vc	0.632	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	403.79	J/mol×K	604.12	Joback Method
cpg	420.22	J/mol×K	643.69	Joback Method

cpg	435.39	J/mol×K	683.25	Joback Method
cpg	449.43	J/mol×K	722.82	Joback Method
cpg	462.46	J/mol×K	762.38	Joback Method
cpg	474.59	J/mol×K	801.95	Joback Method
cpg	485.96	J/mol×K	841.51	Joback Method
dvisc	0.0014900	Pa×s	361.67	Joback Method
dvisc	0.0012115	Pa×s	402.08	Joback Method
dvisc	0.0010230	Pa×s	442.49	Joback Method
dvisc	0.0008887	Pa×s	482.89	Joback Method
dvisc	0.0007889	Pa×s	523.30	Joback Method
dvisc	0.0007124	Pa×s	563.71	Joback Method
dvisc	0.0006522	Pa×s	604.12	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	396.70	K	0.10	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.02879e+01
Coeff. B	-2.93205e+03
Coeff. C	-8.67250e+01
Temperature range (K), min.	379.92
Temperature range (K), max.	675.91

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=C2294828&Units=SI

The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
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
pvap:	Vapor 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