9H-Fluorene, 9-methyl-

Other names: Fluorene, 9-methyl-
9-Methylfluorene
9-Methyl-9H-fluorene
Inchi: InChI=1S/C14H12/c1-10-11-6-2-4-8-13(11)14-9-5-3-7-12(10)14/h2-10H,1H3
InchiKey: ZVEJRZRAUYJYCO-UHFFFAOYSA-N
Formula: C14H12
SMILES: CC1c2ccccc2-c2ccccc21
Mol. weight [g/mol]: 180.25
CAS: 2523-37-7

Physical Properties

Property code	Value	Unit	Source
chs	-7289.36	kJ/mol	NIST Webbook
gf	357.51	kJ/mol	Joback Method
hf	148.00 ± 1.10	kJ/mol	NIST Webbook
hfs	65.30 ± 1.00	kJ/mol	NIST Webbook
hfus	21.66	kJ/mol	Joback Method
hsub	82.70	kJ/mol	NIST Webbook
hsub	82.77	kJ/mol	NIST Webbook
hsub	83.70 ± 0.60	kJ/mol	NIST Webbook
hsub	82.80 ± 0.30	kJ/mol	NIST Webbook
hvap	71.30 ± 0.20	kJ/mol	NIST Webbook
hvap	70.60 ± 0.30	kJ/mol	NIST Webbook
hvap	66.50	kJ/mol	NIST Webbook
log10ws	-4.80		Crippen Method
logp	3.819		Crippen Method
mcvol	149.740	ml/mol	McGowan Method
pc	2921.84	kPa	Joback Method
rinpol	1579.00		NIST Webbook
rinpol	273.79		NIST Webbook
rinpol	272.38		NIST Webbook
rinpol	273.90		NIST Webbook
rinpol	271.50		NIST Webbook
rinpol	273.49		NIST Webbook
rinpol	273.50		NIST Webbook
rinpol	273.80		NIST Webbook
rinpol	271.72		NIST Webbook

rinpol	272.38		NIST Webbook
rinpol	271.40		NIST Webbook
rinpol	272.38		NIST Webbook
rinpol	273.90		NIST Webbook
rinpol	271.72		NIST Webbook
rinpol	273.90		NIST Webbook
rinpol	1579.00		NIST Webbook
rinpol	272.51		NIST Webbook
rinpol	1600.00		NIST Webbook
rinpol	272.90		NIST Webbook
rinpol	272.38		NIST Webbook
ripol	2466.00		NIST Webbook
ripol	2466.00		NIST Webbook
ripol	2466.00		NIST Webbook
tb	581.24	K	Joback Method
tc	823.69	K	Joback Method
tf	350.40	K	Joback Method
vc	0.577	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	433.85	J/mol×K	823.69	Joback Method
cpg	355.41	J/mol×K	581.24	Joback Method
cpg	371.25	J/mol×K	621.65	Joback Method
cpg	385.82	J/mol×K	662.06	Joback Method
cpg	399.24	J/mol×K	702.47	Joback Method
cpg	411.63	J/mol×K	742.88	Joback Method
cpg	423.13	J/mol×K	783.28	Joback Method
dvisc	0.0006591	Pa×s	581.24	Joback Method
dvisc	0.0013776	Pa×s	350.40	Joback Method
dvisc	0.0011465	Pa×s	388.87	Joback Method
dvisc	0.0009862	Pa×s	427.35	Joback Method
dvisc	0.0008697	Pa×s	465.82	Joback Method
dvisc	0.0007818	Pa×s	504.29	Joback Method
dvisc	0.0007135	Pa×s	542.77	Joback Method
hfust	16.32	kJ/mol	319.20	NIST Webbook
hfust	16.32	kJ/mol	319.20	NIST Webbook
hsubt	82.80 ± 0.30	kJ/mol	338.00	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	428.20	K	2.00	NIST Webbook

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C2523377&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method: https://en.wikipedia.org/wiki/Joback_method

Legend

chs: Standard solid enthalpy of combustion
cpg: Ideal gas heat capacity
dvisc: Dynamic viscosity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions
hfs: Solid phase enthalpy of formation at standard conditions
hfus: Enthalpy of fusion at standard conditions
hfust: Enthalpy of fusion at a given temperature
hsub: Enthalpy of sublimation at standard conditions
hsubt: Enthalpy of sublimation at a given temperature
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
rinpol: Non-polar retention indices
ripol: 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