Phenanthrene, 9-dodecyltetradecahydro-

Other names: 9-n-Dodecylperhydrophenanthrene
9-n-Dodecyl(tetradecahydrophenanthrene)
9-Dodecyltetrahydrophenanthrene
Inchi: InChI=1S/C26H48/c1-2-3-4-5-6-7-8-9-10-11-16-22-21-23-17-12-13-18-24(23)26-20-15-14
InchiKey: JTVJHJFIEIFWQH-UHFFFAOYSA-N
Formula: C26H48
SMILES: CCCCCCCCCCCCC1CC2CCCCC2C2CCCCC12
Mol. weight [g/mol]: 360.66
CAS: 55334-01-5

Physical Properties

Property code	Value	Unit	Source
gf	274.37	kJ/mol	Joback Method
hf	-433.05	kJ/mol	Joback Method
hfus	49.14	kJ/mol	Joback Method
hvap	73.45	kJ/mol	Joback Method
log10ws	-9.18		Crippen Method
logp	8.930		Crippen Method
mcvol	344.620	ml/mol	McGowan Method
pc	938.07	kPa	Joback Method
tb	826.51	K	Joback Method
tc	1026.96	K	Joback Method
tf	410.52	K	Joback Method
vc	1.321	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1203.39	J/mol×K	826.51	Joback Method
cpg	1229.34	J/mol×K	859.92	Joback Method
cpg	1253.73	J/mol×K	893.33	Joback Method
cpg	1276.64	J/mol×K	926.73	Joback Method
cpg	1298.15	J/mol×K	960.14	Joback Method
cpg	1318.36	J/mol×K	993.55	Joback Method

cpg	1337.35	J/mol×K	1026.96	Joback Method
dvisc	0.0030069	Pa×s	410.52	Joback Method
dvisc	0.0016056	Pa×s	479.85	Joback Method
dvisc	0.0010045	Pa×s	549.18	Joback Method
dvisc	0.0006982	Pa×s	618.51	Joback Method
dvisc	0.0005222	Pa×s	687.85	Joback Method
dvisc	0.0004119	Pa×s	757.18	Joback Method
dvisc	0.0003380	Pa×s	826.51	Joback Method
hvapt	90.80	kJ/mol	522.00	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C55334015&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
McGowan Method: http://link.springer.com/article/10.1007/BF02311772

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