Benzene, (1-tetradecylpentadecyl)-

Other names: 15-Phenylnonacosane
Inchi: InChI=1S/C35H64/c1-3-5-7-9-11-13-15-17-19-21-23-26-30-34(35-32-28-25-29-33-35)31-
InchiKey: YNXOIJANZCYQIZ-UHFFFAOYSA-N
Formula: C35H64
SMILES: CCCCCCCCCCCCCCC(CCCCCCCCCCCCCC)c1ccccc1
Mol. weight [g/mol]: 484.88
CAS: 56247-97-3

Physical Properties

Property code	Value	Unit	Source
gf	353.79	kJ/mol	Joback Method
hf	-534.48	kJ/mol	Joback Method
hfus	76.92	kJ/mol	Joback Method
hvap	95.39	kJ/mol	Joback Method
log10ws	-13.54		Crippen Method
logp	12.953		Crippen Method
mcvol	480.250	ml/mol	McGowan Method
pc	556.51	kPa	Joback Method
tb	1026.44	K	Joback Method
tc	1275.13	K	Joback Method
tf	319.60 ± 0.50	K	NIST Webbook
vc	1.881	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1725.57	J/mol×K	1026.44	Joback Method
cpg	1753.00	J/mol×K	1067.89	Joback Method
cpg	1778.59	J/mol×K	1109.34	Joback Method
cpg	1802.51	J/mol×K	1150.79	Joback Method
cpg	1824.97	J/mol×K	1192.23	Joback Method
cpg	1846.13	J/mol×K	1233.68	Joback Method
cpg	1866.19	J/mol×K	1275.13	Joback Method
dvisc	0.0004897	Pa×s	495.63	Joback Method

dvisc	0.0001592	Pa×s	584.10	Joback Method
dvisc	0.0000695	Pa×s	672.57	Joback Method
dvisc	0.0000368	Pa×s	761.04	Joback Method
dvisc	0.0000223	Pa×s	849.50	Joback Method
dvisc	0.0000148	Pa×s	937.97	Joback Method
dvisc	0.0000106	Pa×s	1026.44	Joback Method
hvapt	126.50	kJ/mol	536.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.31944e+01
Coeff. B	-5.47813e+03
Coeff. C	-1.50762e+02
Temperature range (K), min.	575.20
Temperature range (K), max.	845.70

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C56247973&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

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

Joback Method: https://en.wikipedia.org/wiki/Joback_method

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