

Benzene, 1,1'-tetradecylidenebis-

Other names:	1,1-Diphenyltetradecane
Inchi:	InChI=1S/C26H38/c1-2-3-4-5-6-7-8-9-10-11-18-23-26(24-19-14-12-15-20-24)25-21-16-1
InchiKey:	RHISRDQWNQEBBY-UHFFFAOYSA-N
Formula:	C26H38
SMILES:	CCCCCCCCCCCCC(c1ccccc1)c1ccccc1
Mol. weight [g/mol]:	350.58
CAS:	55268-63-8

Physical Properties

Property code	Value	Unit	Source
gf	390.42	kJ/mol	Joback Method
hf	-112.19	kJ/mol	Joback Method
hfus	47.65	kJ/mol	Joback Method
hvap	77.63	kJ/mol	Joback Method
log10ws	-8.98		Crippen Method
logp	8.520		Crippen Method
mcvol	329.680	ml/mol	McGowan Method
pc	1079.22	kPa	Joback Method
tb	847.20	K	Joback Method
tc	1054.16	K	Joback Method
tf	291.10 ± 1.00	K	NIST Webbook
tf	291.10 ± 0.60	K	NIST Webbook
vc	1.270	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1043.74	J/mol×K	847.20	Joback Method
cpg	1063.96	J/mol×K	881.69	Joback Method
cpg	1082.91	J/mol×K	916.19	Joback Method
cpg	1100.67	J/mol×K	950.68	Joback Method
cpg	1117.34	J/mol×K	985.17	Joback Method
cpg	1132.99	J/mol×K	1019.67	Joback Method
cpg	1147.71	J/mol×K	1054.16	Joback Method

dvisc	0.0012925	Paxs	420.62	Joback Method
dvisc	0.0004830	Paxs	491.72	Joback Method
dvisc	0.0002315	Paxs	562.81	Joback Method
dvisc	0.0001308	Paxs	633.91	Joback Method
dvisc	0.0000830	Paxs	705.01	Joback Method
dvisc	0.0000572	Paxs	776.10	Joback Method
dvisc	0.0000420	Paxs	847.20	Joback Method
hvapt	98.20	kJ/mol	498.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.27452e+01
Coeff. B	-4.74261e+03
Coeff. C	-1.29120e+02
Temperature range (K), min.	509.82
Temperature range (K), max.	767.11

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=C55268638&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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

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