Stilbene

Other names:	(2-Phenylethenyl)benzene
	1,1'-(1,2-Ethenediyl)bis[benzene]
	1,2-Diphenylethene
	1,2-Diphenylethylene
	Benzene, 1,1'-(1,2-ethenediyl)bis-
	Bibenzal
	Bibenzylidene
	Bibenzylidine
	Stilben
	«alpha»,«beta»-Diphenylethylene
	Â«alphaÂ»,Â«betaÂ»-Diphenylethylene
Inchi:	InChI=1S/C14H12/c1-3-7-13(8-4-1)11-12-14-9-5-2-6-10-14/h1-12H
InchiKey:	PJANXHGTPQOBST-UHFFFAOYSA-N
Formula:	C14H12
SMILES:	C(=Cc1ccccc1)c1ccccc1
Mol. weight [g/mol]:	180.25
CAS:	588-59-0

Physical Properties

Property code	Value	Unit	Source
gf	372.04	kJ/mol	Joback Method
hf	257.99	kJ/mol	Joback Method
hfus	20.30	kJ/mol	Joback Method
hvap	51.27	kJ/mol	Joback Method
ie	7.95	eV	NIST Webbook
ie	7.90	eV	NIST Webbook
ie	7.93 ± 0.03	eV	NIST Webbook
ie	10.30	eV	NIST Webbook
ie	7.94	eV	NIST Webbook
ie	7.50	eV	NIST Webbook
ie	7.60	eV	NIST Webbook
log10ws	-4.08		Crippen Method
logp	3.857		Crippen Method
mcvol	156.300	ml/mol	McGowan Method
pc	2928.17	kPa	Joback Method
rinpol	1492.00		NIST Webbook
rinpol	290.60		NIST Webbook

rinpol	1500.00		NIST Webbook
ripol	2491.00		NIST Webbook
ss	251.00	J/mol×K	NIST Webbook
tb	577.24	K	Joback Method
tc	828.15	K	Joback Method
tf	295.30	K	Joback Method
vc	0.584	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	385.74	J/mol×K	660.88	Joback Method
cpg	400.15	J/mol×K	702.70	Joback Method
cpg	352.81	J/mol×K	577.24	Joback Method
cpg	370.00	J/mol×K	619.06	Joback Method
cpg	436.51	J/mol×K	828.15	Joback Method
cpg	425.43	J/mol×K	786.33	Joback Method
cpg	413.35	J/mol×K	744.52	Joback Method
cps	232.60	J/mol×K	298.50	NIST Webbook
cps	239.10	J/mol×K	313.00	NIST Webbook
cps	343.10	J/mol×K	410.00	NIST Webbook
cps	227.20	J/mol×K	292.80	NIST Webbook
dvisc	0.0011098	Pa×s	342.29	Joback Method
dvisc	0.0001520	Pa×s	577.24	Joback Method
dvisc	0.0001965	Pa×s	530.25	Joback Method
dvisc	0.0002670	Pa×s	483.26	Joback Method
dvisc	0.0003875	Pa×s	436.27	Joback Method
dvisc	0.0006154	Pa×s	389.28	Joback Method
dvisc	0.0024141	Pa×s	295.30	Joback Method
hfust	27.83	kJ/mol	397.55	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.59981e+01
Coeff. B	-5.22261e+03

Coeff. C	-1.02293e+02
Temperature range (K), min.	434.72
Temperature range (K), max.	591.00

Sources

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=C588590&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

Legend

cpg:	Ideal gas heat capacity
cps:	Solid phase 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
hfust:	Enthalpy of fusion at a given temperature
hvap:	Enthalpy of vaporization at standard conditions
ie:	Ionization energy
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
ripol:	Polar retention indices
ss:	Solid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume