Benzene, 1,1'-(1-methylethylidene)bis-

Other names:	2',2'-Diphenylpropane
	2,2-Diphenylpropane
	Dimethyldiphenylmethane
	Propane, 2,2-diphenyl-
Inchi:	InChI=1S/C15H16/c1-15(2,13-9-5-3-6-10-13)14-11-7-4-8-12-14/h3-12H,1-2H3
InchiKey:	MILSYCKGLDDVLM-UHFFFAOYSA-N
Formula:	C15H16
SMILES:	CC(C)(c1ccccc1)c1ccccc1
Mol. weight [g/mol]:	196.29
CAS:	778-22-3

Physical Properties

Property code	Value	Unit	Source
chs	-7929.00	kJ/mol	NIST Webbook
gf	303.08	kJ/mol	Joback Method
hf	111.38	kJ/mol	Joback Method
hfus	15.27	kJ/mol	Joback Method
hvap	52.24	kJ/mol	Joback Method
log10ws	-4.08		Crippen Method
logp	4.012		Crippen Method
mcvol	174.690	ml/mol	McGowan Method
pc	2558.51	kPa	Joback Method
tb	554.00 ± 4.00	K	NIST Webbook
tb	554.33 ± 0.30	K	NIST Webbook
tb	556.00 ± 4.00	K	NIST Webbook
tb	556.00 ± 4.00	K	NIST Webbook
tb	555.00 ± 3.00	K	NIST Webbook
tb	555.70	K	NIST Webbook
tb	554.00 ± 3.00	K	NIST Webbook
tc	842.86	K	Joback Method
tf	302.27 ± 0.20	K	NIST Webbook
tf	302.00 ± 4.00	K	NIST Webbook
tf	302.00 ± 4.00	K	NIST Webbook
vc	0.648	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	424.75	J/mol×K	592.73	Joback Method
cpg	444.14	J/mol×K	634.42	Joback Method
cpg	461.88	J/mol×K	676.11	Joback Method
cpg	478.11	J/mol×K	717.79	Joback Method
cpg	492.93	J/mol×K	759.48	Joback Method
cpg	506.49	J/mol×K	801.17	Joback Method
cpg	518.91	J/mol×K	842.86	Joback Method
dvisc	0.0030728	Pa×s	314.07	Joback Method
dvisc	0.0013362	Pa×s	360.51	Joback Method
dvisc	0.0007027	Pa×s	406.96	Joback Method
dvisc	0.0004215	Pa×s	453.40	Joback Method
dvisc	0.0002781	Pa×s	499.84	Joback Method
dvisc	0.0001969	Pa×s	546.29	Joback Method
dvisc	0.0001471	Pa×s	592.73	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.42458e+01
Coeff. B	-4.50010e+03
Coeff. C	-8.75760e+01
Temperature range (K), min.	409.97
Temperature range (K), max.	591.26

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=C778223&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

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
hfus:	Enthalpy of fusion at standard conditions
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
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume