Benzene, 1,1'-(1,2-dimethyl-1,2-ethanediyl)bis-

Other names: Bibenzyl, «alpha»,«alpha»'-dimethyl-
Butane, 2,3-diphenyl-
2,3-Diphenylbutane
Inchi: InChI=1S/C16H18/c1-13(15-9-5-3-6-10-15)14(2)16-11-7-4-8-12-16/h3-14H,1-2H3
InchiKey: NGCFVIRRWORSML-UHFFFAOYSA-N
Formula: C16H18
SMILES: CC(c1ccccc1)C(C)c1ccccc1
Mol. weight [g/mol]: 210.31
CAS: 5789-35-5

Physical Properties

Property code	Value	Unit	Source
gf	303.78	kJ/mol	Joback Method
hf	88.93	kJ/mol	Joback Method
hfus	18.23	kJ/mol	Joback Method
hvap	54.99	kJ/mol	Joback Method
log10ws	-4.65		Crippen Method
logp	4.594		Crippen Method
mcvol	188.780	ml/mol	McGowan Method
pc	2320.31	kPa	Joback Method
tb	577.20 ± 2.00	K	NIST Webbook
tc	858.10	K	Joback Method
tf	286.00 ± 3.00	K	NIST Webbook
tf	281.00 ± 3.00	K	NIST Webbook
vc	0.704	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	570.27	J/mol×K	858.10	Joback Method
cpg	557.20	J/mol×K	818.08	Joback Method
cpg	543.01	J/mol×K	778.05	Joback Method
cpg	527.59	J/mol×K	738.03	Joback Method
cpg	510.86	J/mol×K	698.01	Joback Method

cpg	492.74	J/mol×K	657.98	Joback Method
cpg	473.14	J/mol×K	617.96	Joback Method
dvisc	0.0044099	Pa×s	292.92	Joback Method
dvisc	0.0001307	Pa×s	617.96	Joback Method
dvisc	0.0001773	Pa×s	563.79	Joback Method
dvisc	0.0002565	Pa×s	509.61	Joback Method
dvisc	0.0004053	Pa×s	455.44	Joback Method
dvisc	0.0007244	Pa×s	401.27	Joback Method
dvisc	0.0015524	Pa×s	347.09	Joback Method
hsubt	96.70	kJ/mol	320.50	NIST Webbook

Sources

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
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C5789355&Units=SI

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
hsubt: Enthalpy of sublimation at a given temperature
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
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume

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