Butanedioic acid, 2,3-diphenyl-

Other names:	2,3-Diphenylsuccinic acid
	Succinic acid, 2,3-diphenyl-
	«alpha»,«beta»-Diphenylsuccinic acid
	Racemic-2,3-diphenylbutanedioic acid
Inchi:	InChI=1S/C16H14O4/c17-15(18)13(11-7-3-1-4-8-11)14(16(19)20)12-9-5-2-6-10-12/h1-10
InchiKey:	PVXCQHHWNDJIJP-UHFFFAOYSA-N
Formula:	C16H14O4
SMILES:	O=C(O)C(c1ccccc1)C(C(=O)O)c1ccccc1
Mol. weight [g/mol]:	270.28
CAS:	7584-72-7

Physical Properties

Property code	Value	Unit	Source
chs	-7556.80 ± 3.80	kJ/mol	NIST Webbook
gf	-227.70	kJ/mol	Joback Method
hf	-440.69	kJ/mol	Joback Method
hfus	29.61	kJ/mol	Joback Method
hvap	101.84	kJ/mol	Joback Method
log10ws	-2.85		Crippen Method
logp	2.723		Crippen Method
mcvol	203.660	ml/mol	McGowan Method
pc	3206.41	kPa	Joback Method
tb	910.06	K	Joback Method
tc	1132.47	K	Joback Method
tf	514.42	K	Joback Method
vc	0.753	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	603.65	J/mol×K	910.06	Joback Method
cpg	641.64	J/mol×K	1095.40	Joback Method
cpg	635.32	J/mol×K	1058.34	Joback Method
cpg	628.43	J/mol×K	1021.27	Joback Method

cpg	620.90	J/mol×K	984.20	Joback Method
cpg	612.66	J/mol×K	947.13	Joback Method
cpg	647.47	J/mol×K	1132.47	Joback Method
dvisc	0.0000029	Pa×s	910.06	Joback Method
dvisc	0.0000047	Pa×s	844.12	Joback Method
dvisc	0.0000086	Pa×s	778.18	Joback Method
dvisc	0.0000173	Pa×s	712.24	Joback Method
dvisc	0.0000401	Pa×s	646.30	Joback Method
dvisc	0.0001130	Pa×s	580.36	Joback Method
dvisc	0.0004152	Pa×s	514.42	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C7584727&Units=SI
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

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

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