

Succinic acid diisopropyl ester

Other names:	Diisopropyl butanedioate bis(1-methylethyl) butanedioate butanedioic acid, bis(1-methylethyl) ester diisopropyl succinate succinic acid, diisopropyl ester
Inchi:	InChI=1S/C10H18O4/c1-7(2)13-9(11)5-6-10(12)14-8(3)4/h7-8H,5-6H2,1-4H3
InchiKey:	YPLYFEUBZLLLIY-UHFFFAOYSA-N
Formula:	C10H18O4
SMILES:	CC(C)OC(=O)CCC(=O)OC(C)C
Mol. weight [g/mol]:	202.25
CAS:	924-88-9

Physical Properties

Property code	Value	Unit	Source
gf	-439.40	kJ/mol	Joback Method
hf	-749.89	kJ/mol	Joback Method
hfus	65.77	kJ/mol	Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids
hfus	66.08	kJ/mol	Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids
hfus	66.31	kJ/mol	Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids
hfus	66.63	kJ/mol	Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids
hfus	66.95	kJ/mol	Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids

hfus	64.48		kJ/mol	Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids
hfus	64.69		kJ/mol	Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids
hfus	65.00		kJ/mol	Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids
hfus	67.60		kJ/mol	Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids
hfus	67.28		kJ/mol	Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids
hfus	65.23		kJ/mol	Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids
hfus	65.55		kJ/mol	Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids
hvap	55.39		kJ/mol	Joback Method
log10ws	-1.96			Crippen Method
logp	1.670			Crippen Method
mcvol	166.640		ml/mol	McGowan Method
pc	2333.78		kPa	Joback Method
rinpol	1226.00			NIST Webbook
rinpol	1225.00			NIST Webbook
tb	579.90		K	Joback Method
tc	766.72		K	Joback Method
tf	316.78		K	Joback Method
vc	0.631		m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	416.45	J/molxK	579.90	Joback Method

cpg	479.43	J/molxK	735.58	Joback Method
cpg	468.03	J/molxK	704.45	Joback Method
cpg	456.03	J/molxK	673.31	Joback Method
cpg	443.43	J/molxK	642.17	Joback Method
cpg	430.24	J/molxK	611.04	Joback Method
cpg	490.22	J/molxK	766.72	Joback Method
dvisc	0.0001658	Paxs	579.90	Joback Method
dvisc	0.0002218	Paxs	536.05	Joback Method
dvisc	0.0003126	Paxs	492.19	Joback Method
dvisc	0.0004712	Paxs	448.34	Joback Method
dvisc	0.0007762	Paxs	404.49	Joback Method
dvisc	0.0014437	Paxs	360.63	Joback Method
dvisc	0.0031886	Paxs	316.78	Joback Method

Sources

McGowan Method:

<http://link.springer.com/article/10.1007/BF02311772>

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C924889&Units=SI>

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

Crippen Method:

https://www.chemeo.com/doc/models/crippen_log10ws

Vapour pressure and enthalpy of vaporization of di-iso-propyl and di-tert-butyl esters of dicarboxylic acids:

<https://www.doi.org/10.1016/j.fluid.2011.07.007>

https://en.wikipedia.org/wiki/Joback_method

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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mvol:	McGowan's characteristic volume
pc:	Critical Pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature

tf: Normal melting (fusion) point

vc: Critical Volume

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