Propanoic acid, 2-methyl-, 2-phenylethyl ester

Other names:	Isobutyric acid, phenethyl ester
	«beta»-Phenylethyl isobutyrate
	Benzylcarbinol isobutyrate
	Benzylcarbinyl isobutyrate
	Phenethyl isobutyrate
	2-Phenylethyl isobutyrate
	Phenylethyl isobutyrate
	2-Phenylethyl 2-methylpropionate
	2-Phenylethyl isobutanoate
	Phenethyl 2-methylpropanoate
	Phenylethyl 2-methylpropanoate
	Phenethyl 2-methylpropionate
	2-Phenylethyl 2-methylpropanoate
Inchi:	InChI=1S/C12H16O2/c1-10(2)12(13)14-9-8-11-6-4-3-5-7-11/h3-7,10H,8-9H2,1-2H3
InchiKey:	JDQVBGQWADMTAM-UHFFFAOYSA-N
Formula:	C12H16O2
SMILES:	CC(C)C(=O)OCCc1ccccc1
Mol. weight [g/mol]:	192.25
CAS:	103-48-0

Physical Properties

Property code	Value	Unit	Source
gf	-73.79	kJ/mol	Joback Method
hf	-304.56	kJ/mol	Joback Method
hfus	20.14	kJ/mol	Joback Method
hvap	53.35	kJ/mol	Joback Method
log10ws	-2.57		Crippen Method
logp	2.428		Crippen Method
mcvol	163.620	ml/mol	McGowan Method
pc	2537.93	kPa	Joback Method
rinpol	1375.30		NIST Webbook
rinpol	1400.00		NIST Webbook
rinpol	1375.00		NIST Webbook
rinpol	1371.00		NIST Webbook
rinpol	1368.00		NIST Webbook
rinpol	1396.00		NIST Webbook
rinpol	1403.00		NIST Webbook

rinpol	1374.00		NIST Webbook
rinpol	1368.00		NIST Webbook
rinpol	1375.00		NIST Webbook
rinpol	1396.00		NIST Webbook
rinpol	1395.00		NIST Webbook
rinpol	1368.00		NIST Webbook
ripol	1896.00		NIST Webbook
ripol	1850.00		NIST Webbook
ripol	1900.00		NIST Webbook
ripol	1883.00		NIST Webbook
ripol	1935.00		NIST Webbook
ripol	1875.00		NIST Webbook
ripol	1896.00		NIST Webbook
ripol	1877.00		NIST Webbook
ripol	1916.00		NIST Webbook
ripol	1855.00		NIST Webbook
tb	576.49	K	Joback Method
tc	786.80	K	Joback Method
tf	308.58	K	Joback Method
vc	0.618	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	394.41	J/mol×K	576.49	Joback Method
cpg	409.96	J/mol×K	611.54	Joback Method
cpg	424.63	J/mol×K	646.59	Joback Method
cpg	438.42	J/mol×K	681.64	Joback Method
cpg	451.37	J/mol×K	716.69	Joback Method
cpg	463.49	J/mol×K	751.74	Joback Method
cpg	474.82	J/mol×K	786.80	Joback Method
dvisc	0.0029260	Pa×s	308.58	Joback Method
dvisc	0.0013546	Pa×s	353.23	Joback Method
dvisc	0.0007455	Pa×s	397.88	Joback Method
dvisc	0.0004628	Pa×s	442.54	Joback Method
dvisc	0.0003136	Pa×s	487.19	Joback Method
dvisc	0.0002268	Pa×s	531.84	Joback Method
dvisc	0.0001725	Pa×s	576.49	Joback Method

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=C103480&Units=SI
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
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
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume