Isopropyl acrylate

Other names:	1-methylethyl 2-propenoate
	2-Propenoic acid, 1-methylethyl ester
	2-Propenoic acid,isopropyl ester
	Acrylic acid, isopropyl ester
	Isopropyl 2-propenoate
	Isopropyl ester of 2-propenoic acid
Inchi:	InChI=1S/C6H10O2/c1-4-6(7)8-5(2)3/h4-5H,1H2,2-3H3
InchiKey:	LYBIZMNPXTXVMV-UHFFFAOYSA-N
Formula:	C6H10O2
SMILES:	C=CC(=O)OC(C)C
Mol. weight [g/mol]:	114.14
CAS:	689-12-3

Physical Properties

Property code	Value	Unit	Source
gf	-148.88	kJ/mol	Joback Method
hf	-291.82	kJ/mol	Joback Method
hfus	9.28	kJ/mol	Joback Method
hvap	37.05	kJ/mol	Joback Method
log10ws	-1.16		Crippen Method
logp	1.124		Crippen Method
mcvol	98.540	ml/mol	McGowan Method
pc	3468.36	kPa	Joback Method
rinpol	722.00		NIST Webbook
ripol	996.00		NIST Webbook
tb	409.21	K	Joback Method
tc	594.78	K	Joback Method
tf	212.78	K	Joback Method
vc	0.370	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	184.94	J/mol×K	409.21	Joback Method

cpg	194.42	J/mol×K	440.14	Joback Method
cpg	203.56	J/mol×K	471.07	Joback Method
cpg	212.35	J/mol×K	502.00	Joback Method
cpg	220.81	J/mol×K	532.93	Joback Method
cpg	228.92	J/mol×K	563.86	Joback Method
cpg	236.69	J/mol×K	594.78	Joback Method
dvisc	0.0040214	Pa×s	212.78	Joback Method
dvisc	0.0018765	Pa×s	245.52	Joback Method
dvisc	0.0010476	Pa×s	278.26	Joback Method
dvisc	0.0006612	Pa×s	311.00	Joback Method
dvisc	0.0004556	Pa×s	343.73	Joback Method
dvisc	0.0003349	Pa×s	376.47	Joback Method
dvisc	0.0002586	Pa×s	409.21	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.36320e+01
Coeff. B	-3.14702e+03
Coeff. C	-4.76660e+01
Temperature range (K), min.	283.50
Temperature range (K), max.	425.89

Sources

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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

Phase behavior measurement on the binary mixture for isopropyl acrylate and isopropyl methacrylate in supercritical CO2: https://www.doi.org/10.1016/j.fluid.2006.08.019

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=C689123&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
pvap:	Vapor 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