2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester

Other names: Methacrylic acid, tert-butyl ester
Methylacrylic acid, tert-butyl ester
tert-Butyl methacrylate

Inchi: InChI=1S/C8H14O2/c1-6(2)7(9)10-8(3,4)5/h1H2,2-5H3

InchiKey: SJMYWORNLPSJQO-UHFFFAOYSA-N

Formula: C8H14O2

SMILES: C=C(C)C(=O)OC(C)(C)C

Mol. weight [g/mol]: 142.20

CAS: 585-07-9

Physical Properties

Property code	Value	Unit	Source
gf	-135.31	kJ/mol	Joback Method
hf	-346.36	kJ/mol	Joback Method
hfus	9.26	kJ/mol	Joback Method
hvap	40.67	kJ/mol	Joback Method
log10ws	-2.00		Crippen Method
logp	1.904		Crippen Method
mcvol	126.720	ml/mol	McGowan Method
pc	2847.48	kPa	Joback Method
tb	452.06	K	Joback Method
tc	645.69	K	Joback Method
tf	238.78	K	Joback Method
vc	0.478	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	265.65	J/mol×K	452.06	Joback Method
cpg	278.66	J/mol×K	484.33	Joback Method
cpg	291.02	J/mol×K	516.60	Joback Method
cpg	302.74	J/mol×K	548.88	Joback Method
cpg	313.84	J/mol×K	581.15	Joback Method
cpg	324.35	J/mol×K	613.42	Joback Method

cpg	334.29	J/mol×K	645.69	Joback Method
hvapt	42.90	kJ/mol	361.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.24902e+01
Coeff. B	-3.06332e+03
Coeff. C	-5.37820e+01
Temperature range (K), min.	304.82
Temperature range (K), max.	480.50

Sources

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
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=C585079&Units=SI

Legend

cpg: Ideal gas heat capacity
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
hvapt: Enthalpy of vaporization at a given temperature
log10ws: Log10 of Water solubility in mol/l
logp: Octanol/Water partition coefficient
mcvol: McGowan's characteristic volume
pc: Critical Pressure

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