

2-Propenoic acid, 2-methyl-, 2,2,3,3-tetrafluoropropyl ester

Other names:	2,2,3,3-Tetrafluoropropyl methacrylate
Inchi:	InChI=1S/C7H8F4O2/c1-4(2)5(12)13-3-7(10,11)6(8)9/h6H,1,3H2,2H3
InchiKey:	RSVZYSKAPMBSMY-UHFFFAOYSA-N
Formula:	C7H8F4O2
SMILES:	C=C(C)C(=O)OCC(F)(F)C(F)F
Mol. weight [g/mol]:	200.13
CAS:	45102-52-1

Physical Properties

Property code	Value	Unit	Source
gf	-925.41	kJ/mol	Joback Method
hf	-1115.44	kJ/mol	Joback Method
hfus	15.47	kJ/mol	Joback Method
hvap	34.79	kJ/mol	Joback Method
log10ws	-2.10		Crippen Method
logp	2.006		Crippen Method
mcvol	119.710	ml/mol	McGowan Method
pc	2629.85	kPa	Joback Method
tb	425.82	K	Joback Method
tc	587.93	K	Joback Method
tf	214.87	K	Joback Method
vc	0.488	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	258.45	J/mol×K	425.82	Joback Method
cpg	268.53	J/mol×K	452.84	Joback Method
cpg	278.14	J/mol×K	479.86	Joback Method
cpg	287.29	J/mol×K	506.88	Joback Method
cpg	295.98	J/mol×K	533.89	Joback Method
cpg	304.24	J/mol×K	560.91	Joback Method
cpg	312.07	J/mol×K	587.93	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	343.00	K	6.80	NIST Webbook

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=C45102521&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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
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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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