1H,1H-Pentafluoropropyl methacrylate

Other names: 2-Propenoic acid, 2-methyl-, 2,2,3,3,3-pentafluoropropyl ester
2,2,3,3,3-Pentafluoropropyl methacrylate
1H,1H-Pentafluoro-n-propyl methacrylate
Inchi: InChI=1S/C7H7F5O2/c1-4(2)5(13)14-3-6(8,9)7(10,11)12/h1,3H2,2H3
InchiKey: CLISWDZSTWQFNX-UHFFFAOYSA-N
Formula: C7H7F5O2
SMILES: C=C(C)C(=O)OCC(F)(F)C(F)(F)F
Mol. weight [g/mol]: 218.12
CAS: 45115-53-5

Physical Properties

Property code	Value	Unit	Source
gf	-1114.94	kJ/mol	Joback Method
hf	-1315.02	kJ/mol	Joback Method
hfus	14.65	kJ/mol	Joback Method
hvap	33.06	kJ/mol	Joback Method
log10ws	-2.45		Crippen Method
logp	2.303		Crippen Method
mcvol	121.480	ml/mol	McGowan Method
pc	2540.49	kPa	Joback Method
tb	422.30	K	Joback Method
tc	582.39	K	Joback Method
tf	232.88	K	Joback Method
vc	0.501	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	268.89	J/mol×K	422.30	Joback Method
cpg	279.32	J/mol×K	448.98	Joback Method
cpg	289.16	J/mol×K	475.66	Joback Method
cpg	298.45	J/mol×K	502.34	Joback Method
cpg	307.19	J/mol×K	529.03	Joback Method
cpg	315.42	J/mol×K	555.71	Joback Method

cpg	323.16	J/mol×K	582.39	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	326.00	K	8.70	NIST Webbook

Sources

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=C45115535&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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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