Flurothyl

Other names:	(CF3CH2)2O
	1,1,1-trifluoro-2-(2,2,2-trifluoroethoxy)ethane
	2,2,2-trifluoroethyl ether
	2-(2,2,2-Trifluoroethoxy)-1,1,1-trifluoroethane
	Bis(trifluoroethyl) ether
	Ethane, 1,1'-oxybis[2,2,2-trifluoro-
	Ether, bis(2,2,2-trifluoroethyl)
	Fluorothyl
	Flurotyl
	HFE 356mff2
	Hexafluorodiethyl ether
	Idoklon
	Indiklon
	Indoklon
	SKF 6539
	bis(2,2,2-trifluoroethyl) ether
	di(2,2,2-Trifluoroethyl) ether
Inchi:	InChI=1S/C4H4F6O/c5-3(6,7)1-11-2-4(8,9)10/h1-2H2
InchiKey:	KGPPDNUWZNWPSI-UHFFFAOYSA-N
Formula:	C4H4F6O
SMILES:	FC(F)(F)COCC(F)(F)F
Mol. weight [g/mol]:	182.06
CAS:	333-36-8

Physical Properties

Property code	Value	Unit	Source
affp	702.30	kJ/mol	NIST Webbook
basg	674.90	kJ/mol	NIST Webbook
gf	-1285.38	kJ/mol	Joback Method
hf	-1452.27	kJ/mol	Joback Method
hfus	10.96	kJ/mol	Joback Method
hvap	35.00	kJ/mol	NIST Webbook
log10ws	-1.91		Crippen Method
logp	2.128		Crippen Method
mcvol	83.710	ml/mol	McGowan Method

pc	2783.00	kPa	Critical Parameters and Vapor Pressures Measurements of Hydrofluoroethers at High Temperatures
tb	337.00	K	NIST Webbook
tb	337.00	K	NIST Webbook
tc	434.77	K	Joback Method
tf	165.45	K	Joback Method
vc	0.363	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	163.24	J/mol×K	302.50	Joback Method
cpg	171.19	J/mol×K	324.54	Joback Method
cpg	178.79	J/mol×K	346.59	Joback Method
cpg	186.03	J/mol×K	368.63	Joback Method
cpg	192.94	J/mol×K	390.68	Joback Method
cpg	199.52	J/mol×K	412.72	Joback Method
cpg	205.78	J/mol×K	434.77	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Critical Parameters and Vapor Pressures Measurements of Hydrofluoroethers at High Temperatures:	https://www.doi.org/10.1021/je0201976
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=C333368&Units=SI

Legend

affp:	Proton affinity
basg:	Gas basicity
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
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume