Ethanol, 2-fluoro-

Other names:	2-Fluoro-1-ethanol
	2-Fluoroethanol
	CH2FCH2OH
	Ethylene fluorohydrin
	TL 741
	«beta»-Fluoroethanol
	Â«betaÂ»-Fluoroethanol
Inchi:	InChI=1S/C2H5FO/c3-1-2-4/h4H,1-2H2
InchiKey:	GGDYAKVUZMZKRV-UHFFFAOYSA-N
Formula:	C2H5FO
SMILES:	OCCF
Mol. weight [g/mol]:	64.06
CAS:	371-62-0

Physical Properties

Property code	Value	Unit	Source
affp	715.60	kJ/mol	NIST Webbook
basg	685.20	kJ/mol	NIST Webbook
gf	-365.67	kJ/mol	Joback Method
hf	-432.95	kJ/mol	Joback Method
hfus	8.10	kJ/mol	Joback Method
hvap	35.91	kJ/mol	Joback Method
ie	10.98	eV	NIST Webbook
ie	11.05	eV	NIST Webbook
ie	10.66	eV	NIST Webbook
ie	11.05	eV	NIST Webbook
log10ws	0.22		Crippen Method
logp	-0.052		Crippen Method
mcvol	46.680	ml/mol	McGowan Method
pc	5382.80	kPa	Joback Method
rinpol	494.00		NIST Webbook
tb	336.61	K	Joback Method
tc	489.57	K	Joback Method
tf	173.71	K	Joback Method
vc	0.184	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	79.24	J/mol×K	336.61	Joback Method
cpg	83.26	J/mol×K	362.10	Joback Method
cpg	87.15	J/mol×K	387.60	Joback Method
cpg	90.91	J/mol×K	413.09	Joback Method
cpg	94.55	J/mol×K	438.58	Joback Method
cpg	98.06	J/mol×K	464.07	Joback Method
cpg	101.45	J/mol×K	489.57	Joback Method
hvapt	44.10	kJ/mol	303.00	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	376.20	K	101.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.87781e+01
Coeff. B	-5.33157e+03
Coeff. C	-1.20000e-01
Temperature range (K), min.	288.46
Temperature range (K), max.	396.03

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

Henry s Law Constants of Organic Compounds in Water and n-Octane at T = 298.2 K:	https://www.doi.org/10.1021/je900711h
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=C371620&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
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
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
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume