

2-Fluoropropene

Other names:	1-Propene, 2-fluoro- 2-Fluoro-1-propene 2-Fluoroprop-1-ene CH ₃ CF=CH ₂ Propene, 2-fluoro-
Inchi:	InChI=1S/C3H5F/c1-3(2)4/h1H2,2H3
InchiKey:	NGOCAPPEAVAHQM-UHFFFAOYSA-N
Formula:	C ₃ H ₅ F
SMILES:	C=C(C)F
Mol. weight [g/mol]:	60.07
CAS:	1184-60-7

Physical Properties

Property code	Value	Unit	Source
gf	-141.14	kJ/mol	Joback Method
hf	-185.72	kJ/mol	Joback Method
hfus	4.02	kJ/mol	Joback Method
hvap	20.87	kJ/mol	Joback Method
log10ws	-1.28		Crippen Method
logp	1.490		Crippen Method
mcvol	50.600	ml/mol	McGowan Method
pc	4420.84	kPa	Joback Method
tb	263.87	K	Joback Method
tc	420.05	K	Joback Method
tf	108.44	K	Joback Method
vc	0.203	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	65.89	J/mol×K	263.87	Joback Method
cpg	70.88	J/mol×K	289.90	Joback Method
cpg	75.68	J/mol×K	315.93	Joback Method
cpg	80.30	J/mol×K	341.96	Joback Method

cpg	84.74	J/mol×K	367.99	Joback Method
cpg	89.02	J/mol×K	394.02	Joback Method
cpg	93.12	J/mol×K	420.05	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.47962e+01
Coeff. B	-2.47235e+03
Coeff. C	-1.04140e+01
Temperature range (K), min.	180.82
Temperature range (K), max.	271.08

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=C1184607&Units=SI
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/ci9903071

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

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

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