

Propane, 1,2-dichloro-2-fluoro-

Other names:	1,2-Dichloro-2-fluoropropane
Inchi:	InChI=1S/C3H5Cl2F/c1-3(5,6)2-4/h2H2,1H3
InchiKey:	OTKOPXLUNRNYCD-UHFFFAOYSA-N
Formula:	C3H5Cl2F
SMILES:	CC(F)(Cl)CCl
Mol. weight [g/mol]:	130.98
CAS:	420-97-3

Physical Properties

Property code	Value	Unit	Source
gf	-241.45	kJ/mol	Joback Method
hf	-341.59	kJ/mol	Joback Method
hfus	7.59	kJ/mol	Joback Method
hvap	28.93	kJ/mol	Joback Method
log10ws	-1.84		Crippen Method
logp	2.150		Crippen Method
mcvol	79.380	ml/mol	McGowan Method
pc	3877.12	kPa	Joback Method
tb	359.75 ± 0.40	K	NIST Webbook
tc	522.95	K	Joback Method
tf	181.45 ± 0.50	K	NIST Webbook
vc	0.308	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	119.05	J/molxK	338.94	Joback Method
cpg	125.93	J/molxK	369.61	Joback Method
cpg	132.36	J/molxK	400.28	Joback Method
cpg	138.37	J/molxK	430.94	Joback Method
cpg	143.98	J/molxK	461.61	Joback Method
cpg	149.21	J/molxK	492.28	Joback Method
cpg	154.08	J/molxK	522.95	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.55319e+01
Coeff. B	-3.47086e+03
Coeff. C	-4.17160e+01
Temperature range (K), min.	269.40
Temperature range (K), max.	383.97

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=C420973&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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