1,2-Dibromotetrafluoroethane

Other names:	(CF2Br)2
	1,2-Dibromo tetrafluoro methane
	1,2-Dibromo-1,1,2,2-tetrafluoroethane
	1,2-Dibromoperfluoroethane
	Daiflon 114B2
	Ethane, 1,2-dibromo-1,1,2,2-tetrafluoro-
	Ethane, 1,2-dibromotetrafluoro-
	F-114B2
	FC 114B2
	Fluobrene
	Fluorocarbon 114B2
	Freon 114B2
	Halon 2402
	Khladon 114B2
	R 114B2
	s-Dibromotetrafluoroethane
	sym-Dibromotetrafluoroethane
Inchi:	InChI=1S/C2Br2F4/c3-1(5,6)2(4,7)8
InchiKey:	KVBKAPANDHPRDG-UHFFFAOYSA-N
Formula:	C2Br2F4
SMILES:	FC(F)(Br)C(F)(F)Br
Mol. weight [g/mol]:	259.82
CAS:	124-73-2

Physical Properties

Property code	Value	Unit	Source
gf	-778.96	kJ/mol	Joback Method
hf	-833.89	kJ/mol	Joback Method
hfus	9.00	kJ/mol	Joback Method
hvap	28.61	kJ/mol	NIST Webbook
hvap	28.40 ± 0.10	kJ/mol	NIST Webbook
hvap	28.50	kJ/mol	NIST Webbook
ie	11.10	eV	NIST Webbook
ie	11.44 ± 0.01	eV	NIST Webbook
log10ws	-3.14		Crippen Method
logp	2.962		Crippen Method
mcvol	81.120	ml/mol	McGowan Method

pc	5001.51	kPa	Joback Method
sl	299.40	J/mol×K	NIST Webbook
tb	319.60	K	NIST Webbook
tb	319.00 ± 3.00	K	NIST Webbook
tb	320.60 ± 0.50	K	NIST Webbook
tb	320.37 ± 0.01	K	NIST Webbook
tb	320.30	K	NIST Webbook
tb	320.40	K	NIST Webbook
tc	487.80	K	NIST Webbook
tf	161.65 ± 0.30	K	NIST Webbook
tt	162.83 ± 0.02	K	NIST Webbook
vc	0.322	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	148.46	J/mol×K	495.47	Joback Method
cpg	134.35	J/mol×K	399.94	Joback Method
cpg	139.68	J/mol×K	431.78	Joback Method
cpg	144.37	J/mol×K	463.62	Joback Method
cpg	155.05	J/mol×K	559.15	Joback Method
cpg	152.00	J/mol×K	527.31	Joback Method
cpg	128.33	J/mol×K	368.10	Joback Method
cpl	170.80	J/mol×K	298.15	NIST Webbook
cpl	173.80	J/mol×K	298.15	NIST Webbook
hfust	7.04	kJ/mol	162.80	NIST Webbook
hfust	7.04	kJ/mol	162.80	NIST Webbook
hvapt	26.50 ± 0.10	kJ/mol	328.00	NIST Webbook
hvapt	27.50 ± 0.10	kJ/mol	313.00	NIST Webbook
hvapt	30.00	kJ/mol	270.50	NIST Webbook
hvapt	27.10	kJ/mol	464.00	NIST Webbook
hvapt	26.90	kJ/mol	398.50	NIST Webbook
hvapt	27.03	kJ/mol	320.30	NIST Webbook

Correlations

Information	Value
Property code	pvap

Equation	ln(Pvp) = A + B/T + C*ln(T) + D*T^2
Coeff. A	5.03111e+01
Coeff. B	-4.88669e+03
Coeff. C	-5.34985e+00
Coeff. D	3.90524e-06
Temperature range (K), min.	162.65
Temperature range (K), max.	487.70

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
KDB:	https://www.cheric.org/files/research/kdb/mol/mol1534.mol
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C124732&Units=SI
KDB Vapor Pressure Data:	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1534

Legend

cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion at a given temperature
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
sl:	Liquid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point

tt:	Triple Point Temperature
vc:	Critical Volume