Methane, bromodifluoro-

Other names:	Bromodifluoromethane
	CHBrF2
	Difluorobromomethane
Inchi:	InChI=1S/CHBrF2/c2-1(3)4/h1H
InchiKey:	GRCDJFHYVYUNHM-UHFFFAOYSA-N
Formula:	CHBrF2
SMILES:	FC(F)Br
Mol. weight [g/mol]:	130.92
CAS:	1511-62-2

Physical Properties

Property code	Value	Unit	Source
gf	-420.20	kJ/mol	Joback Method
hf	-425.30 ± 0.90	kJ/mol	NIST Webbook
hfus	6.27	kJ/mol	Joback Method
hvap	22.23	kJ/mol	Joback Method
log10ws	-1.48		Crippen Method
logp	1.604		Crippen Method
mcvol	45.990	ml/mol	McGowan Method
pc	5132.00 ± 10.00	kPa	NIST Webbook
tb	258.60	K	NIST Webbook
tc	411.98 ± 0.20	K	NIST Webbook
tf	128.00 ± 2.00	K	NIST Webbook
vc	0.275 ± 0.005	m3/kmol	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	58.12	J/mol×K	286.54	Joback Method
cpg	60.79	J/mol×K	314.42	Joback Method
cpg	63.32	J/mol×K	342.30	Joback Method
cpg	65.70	J/mol×K	370.18	Joback Method
cpg	67.95	J/mol×K	398.06	Joback Method
cpg	70.07	J/mol×K	425.94	Joback Method

cpg	72.06	J/mol×K	453.82	Joback Method
hvapt	24.00	kJ/mol	226.50	NIST Webbook
hvapt	24.70	kJ/mol	241.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.45065e+01
Coeff. B	-2.30538e+03
Coeff. C	-2.45230e+01
Temperature range (K), min.	186.66
Temperature range (K), max.	411.98

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1511622&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/ci990307l

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Joback Method: https://en.wikipedia.org/wiki/Joback_method

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

hvapt: Enthalpy of vaporization at a given temperature

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