

bromine chloride

Other names:	Bromine monochloride
Inchi:	InChI=1S/BrCl/c1-2
InchiKey:	CODNYICXDISAEA-UHFFFAOYSA-N
Formula:	BrCl
SMILES:	ClBr
Mol. weight [g/mol]:	115.36
CAS:	13863-41-7

Physical Properties

Property code	Value	Unit	Source
gf	-48.49	kJ/mol	Joback Method
hf	-32.74	kJ/mol	Joback Method
hfus	5.24	kJ/mol	Joback Method
hvap	26.41	kJ/mol	Joback Method
ie	11.10 ± 0.20	eV	NIST Webbook
ie	11.01	eV	NIST Webbook
log10ws	-1.40		Crippen Method
logp	1.535		Crippen Method
mcvol	40.600	ml/mol	McGowan Method
pc	7109.36	kPa	Joback Method
tb	302.99	K	Joback Method
tc	499.65	K	Joback Method
tf	179.48	K	Joback Method
vc	0.146	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	33.40	J/mol×K	302.99	Joback Method
cpg	33.90	J/mol×K	335.77	Joback Method
cpg	34.32	J/mol×K	368.54	Joback Method
cpg	34.66	J/mol×K	401.32	Joback Method
cpg	34.95	J/mol×K	434.10	Joback Method
cpg	35.18	J/mol×K	466.88	Joback Method

cpg	35.36	J/mol×K	499.65	Joback Method
dvisc	0.0023933	Paxs	179.48	Joback Method
dvisc	0.0015422	Paxs	200.07	Joback Method
dvisc	0.0010787	Paxs	220.65	Joback Method
dvisc	0.0008020	Paxs	241.24	Joback Method
dvisc	0.0006247	Paxs	261.82	Joback Method
dvisc	0.0005047	Paxs	282.40	Joback Method
dvisc	0.0004197	Paxs	302.99	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C13863417&Units=SI
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
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
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
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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