Butane, 1,2,3,4-tetrabromo-

Other names:	1,2,3,4-Tetrabromobutane
	Fireguard 5000
	NSC 505
	Tetrabromobutane
Inchi:	InChI=1S/C4H6Br4/c5-1-3(7)4(8)2-6/h3-4H,1-2H2
InchiKey:	HGRZLIGHKHRTRE-UHFFFAOYSA-N
Formula:	C4H6Br4
SMILES:	BrCC(Br)C(Br)CBr
Mol. weight [g/mol]:	373.71
CAS:	1529-68-6

Physical Properties

Property code	Value	Unit	Source
gf	35.20	kJ/mol	Joback Method
hf	-31.13	kJ/mol	Joback Method
hfus	20.21	kJ/mol	Joback Method
hvap	49.46	kJ/mol	Joback Method
log10ws	-3.45		Crippen Method
logp	3.303		Crippen Method
mcvol	137.220	ml/mol	McGowan Method
pc	5827.17	kPa	Joback Method
tb	554.68	K	Joback Method
tc	806.06	K	Joback Method
tf	389.40 ± 1.00	K	NIST Webbook
tf	387.00 ± 3.00	K	NIST Webbook
vc	0.495	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	212.69	J/mol×K	554.68	Joback Method
cpg	219.39	J/mol×K	596.58	Joback Method
cpg	225.47	J/mol×K	638.47	Joback Method
cpg	231.00	J/mol×K	680.37	Joback Method

cpg	236.05	J/mol×K	722.26	Joback Method
cpg	240.70	J/mol×K	764.16	Joback Method
cpg	245.03	J/mol×K	806.06	Joback Method
dvisc	0.0026676	Pa×s	344.04	Joback Method
dvisc	0.0015989	Pa×s	379.15	Joback Method
dvisc	0.0010452	Pa×s	414.25	Joback Method
dvisc	0.0007302	Pa×s	449.36	Joback Method
dvisc	0.0005373	Pa×s	484.47	Joback Method
dvisc	0.0004121	Pa×s	519.57	Joback Method
dvisc	0.0003269	Pa×s	554.68	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.55237e+01
Coeff. B	-4.83218e+03
Coeff. C	-8.93660e+01
Temperature range (K), min.	406.52
Temperature range (K), max.	562.54

Sources

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

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1529686&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

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
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