Butane, 1,4-diiodo-

Other names:	1,4-Diiodobutane
	1,4-Diodobutane
	Tetramethylene diiodide
	Tetramethylene iodide
Inchi:	InChI=1S/C4H8I2/c5-3-1-2-4-6/h1-4H2
InchiKey:	ROUYUBHVBIKMQO-UHFFFAOYSA-N
Formula:	C4H8I2
SMILES:	ICCCCI
Mol. weight [g/mol]:	309.92
CAS:	628-21-7

Physical Properties

Property code	Value	Unit	Source
chl	-2687.40 ± 1.80	kJ/mol	NIST Webbook
gf	99.04	kJ/mol	Joback Method
hf	29.00 ± 2.10	kJ/mol	NIST Webbook
hfl	-30.00 ± 2.00	kJ/mol	NIST Webbook
hfus	14.93	kJ/mol	Joback Method
hvap	59.00 ± 0.60	kJ/mol	NIST Webbook
hvap	59.00	kJ/mol	NIST Webbook
log10ws	-3.39		Crippen Method
logp	2.637		Crippen Method
mcvol	118.860	ml/mol	McGowan Method
pc	3690.97	kPa	Joback Method
tb	477.20	K	Joback Method
tc	720.71	K	Joback Method
tf	279.10 ± 0.40	K	NIST Webbook
vc	0.435	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	174.43	J/mol×K	477.20	Joback Method
cpg	182.27	J/mol×K	517.79	Joback Method

cpg	189.54	J/mol×K	558.37	Joback Method
cpg	196.27	J/mol×K	598.96	Joback Method
cpg	202.52	J/mol×K	639.54	Joback Method
cpg	208.32	J/mol×K	680.13	Joback Method
cpg	213.73	J/mol×K	720.71	Joback Method
dvisc	0.0058612	Pa×s	250.96	Joback Method
dvisc	0.0028313	Pa×s	288.67	Joback Method
dvisc	0.0016181	Pa×s	326.37	Joback Method
dvisc	0.0010384	Pa×s	364.08	Joback Method
dvisc	0.0007242	Pa×s	401.79	Joback Method
dvisc	0.0005373	Pa×s	439.49	Joback Method
dvisc	0.0004179	Pa×s	477.20	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	422.70	K	3.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.35236e+01
Coeff. B	-4.05400e+03
Coeff. C	-8.09140e+01
Temperature range (K), min.	387.20
Temperature range (K), max.	574.57

Sources

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=C628217&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

Legend

chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase 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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume