Butanedioyl dichloride

Other names:	1,2-Bis(Chlorocarbonyl)ethane
	Succinic acid dichloride
	Succinic chloride
	Succinoyl chloride
	Succinoyl dichloride
	Succinyl chloride
	Succinyl dichloride
Inchi:	InChI=1S/C4H4Cl2O2/c5-3(7)1-2-4(6)8/h1-2H2
InchiKey:	IRXBNHGNHKNOJI-UHFFFAOYSA-N
Formula:	C4H4Cl2O2
SMILES:	O=C(Cl)CCC(=O)Cl
Mol. weight [g/mol]:	154.98
CAS:	543-20-4

Physical Properties

Property code	Value	Unit	Source
gf	-298.90	kJ/mol	Joback Method
hf	-382.53	kJ/mol	Joback Method
hfus	17.71	kJ/mol	Joback Method
hvap	46.76	kJ/mol	Joback Method
log10ws	-1.35		Crippen Method
logp	1.297		Crippen Method
mcvol	94.840	ml/mol	McGowan Method
pc	4162.33	kPa	Joback Method
tb	466.50	K	NIST Webbook
tb	463.00 ± 2.00	K	NIST Webbook
tb	463.20	K	NIST Webbook
tc	680.43	K	Joback Method
tf	289.90 ± 0.60	K	NIST Webbook
vc	0.369	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source

cpg	192.19	J/mol×K	680.43	Joback Method
cpg	161.05	J/mol×K	473.52	Joback Method
cpg	167.06	J/mol×K	508.01	Joback Method
cpg	172.72	J/mol×K	542.49	Joback Method
cpg	178.06	J/mol×K	576.98	Joback Method
cpg	183.08	J/mol×K	611.46	Joback Method
cpg	187.79	J/mol×K	645.95	Joback Method
dvisc	0.0004665	Pa×s	473.52	Joback Method
dvisc	0.0032896	Pa×s	294.54	Joback Method
dvisc	0.0020453	Pa×s	324.37	Joback Method
dvisc	0.0013776	Pa×s	354.20	Joback Method
dvisc	0.0009866	Pa×s	384.03	Joback Method
dvisc	0.0007415	Pa×s	413.86	Joback Method
dvisc	0.0005790	Pa×s	443.69	Joback Method
hvapt	54.70	kJ/mol	389.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.43917e+01
Coeff. B	-4.33122e+03
Coeff. C	-4.48900e+01
Temperature range (K), min.	312.00
Temperature range (K), max.	521.88

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=C543204&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

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
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