Butane, 1,1'-sulfinylbis-

Other names:	1,1'-sulfinylbisbutane
	Di-n-butyl sulfoxide
	Dibutyl sulphoxide
	Sulfoxide, dibutyl
	butyl sulfoxide
	dibutyl sulfoxide
	n-Butyl sulfoxide
Inchi:	InChI=1S/C8H18OS/c1-3-5-7-10(9)8-6-4-2/h3-8H2,1-2H3
InchiKey:	LOWMYOWHQMKBTM-UHFFFAOYSA-N
Formula:	C8H18OS
SMILES:	CCCCS(=O)CCCC
Mol. weight [g/mol]:	162.29
CAS:	2168-93-6

Physical Properties

Property code	Value	Unit	Source
gf	-201.23	kJ/mol	Joback Method
hf	-414.19	kJ/mol	Joback Method
hfus	24.23	kJ/mol	Joback Method
hvap	46.13	kJ/mol	Joback Method
log10ws	-1.81		Crippen Method
logp	2.335		Crippen Method
mcvol	145.800	ml/mol	McGowan Method
pc	2770.08	kPa	Joback Method
tb	440.72	K	Joback Method
tc	614.01	K	Joback Method
tf	305.00 ± 4.00	K	NIST Webbook
tf	306.00 ± 5.00	K	NIST Webbook
tf	305.00 ± 4.00	K	NIST Webbook
vc	0.574	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source

cpg	298.51	J/mol×K	440.72	Joback Method
cpg	312.25	J/mol×K	469.60	Joback Method
cpg	325.47	J/mol×K	498.48	Joback Method
cpg	338.19	J/mol×K	527.37	Joback Method
cpg	350.42	J/mol×K	556.25	Joback Method
cpg	362.16	J/mol×K	585.13	Joback Method
cpg	373.41	J/mol×K	614.01	Joback Method
srf	0.03	N/m	313.15	Surface and bulk behavior of (dialkylsulfoxides + carbon tetrachloride) mixtures

Sources

Surface and bulk behavior of (dialkylsulfoxides + carbon tetrachloride) mixtures:	https://www.doi.org/10.1016/j.jct.2009.06.021
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=C2168936&Units=SI
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
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
srf:	Surface Tension
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume