Butane, 1,4-diethoxy-

Other names: 1,4-Diethoxybutane
Inchi: InChI=1S/C8H18O2/c1-3-9-7-5-6-8-10-4-2/h3-8H2,1-2H3
InchiKey: IIHAWQOFHTYWGM-UHFFFAOYSA-N
Formula: C8H18O2
SMILES: CCOCCCCOCC
Mol. weight [g/mol]: 146.23
CAS: 13344-00-8

Physical Properties

Property code	Value	Unit	Source
gf	-193.52	kJ/mol	Joback Method
hf	-472.89	kJ/mol	Joback Method
hfus	18.85	kJ/mol	Joback Method
hvap	38.22	kJ/mol	Joback Method
log10ws	-1.35		Crippen Method
logp	1.840		Crippen Method
mcvol	135.320	ml/mol	McGowan Method
pc	2450.74	kPa	Joback Method
rinpol	942.60		NIST Webbook
rinpol	936.60		NIST Webbook
rinpol	936.60		NIST Webbook
tb	427.28	K	Joback Method
tc	591.50	K	Joback Method
tf	224.38	K	Joback Method
vc	0.519	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	282.41	J/mol×K	427.28	Joback Method
cpg	294.87	J/mol×K	454.65	Joback Method
cpg	307.00	J/mol×K	482.02	Joback Method
cpg	318.79	J/mol×K	509.39	Joback Method
cpg	330.24	J/mol×K	536.76	Joback Method

cpg	341.34	J/mol×K	564.13	Joback Method
cpg	352.10	J/mol×K	591.50	Joback Method
dvisc	0.0030523	Pa×s	224.38	Joback Method
dvisc	0.0014226	Pa×s	258.20	Joback Method
dvisc	0.0007912	Pa×s	292.01	Joback Method
dvisc	0.0004971	Pa×s	325.83	Joback Method
dvisc	0.0003408	Pa×s	359.65	Joback Method
dvisc	0.0002493	Pa×s	393.46	Joback Method
dvisc	0.0001917	Pa×s	427.28	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C13344008&Units=SI

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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume