

# Butyl sulfuric acid

<b>Inchi:</b>	InChI=1S/C4H10O4S/c1-2-3-4-8-9(5,6)7/h2-4H2,1H3,(H,5,6,7)
<b>InchiKey:</b>	ZTHQBROSBNNGPU-UHFFFAOYSA-N
<b>Formula:</b>	C4H10O4S
<b>SMILES:</b>	CCCCOS(=O)(=O)O
<b>Mol. weight [g/mol]:</b>	154.19
<b>CAS:</b>	15507-13-8

## Physical Properties

Property code	Value	Unit	Source
gf	-727.56	kJ/mol	Joback Method
hf	-863.69	kJ/mol	Joback Method
hfl	-887.00 ± 6.00	kJ/mol	NIST Webbook
hfus	22.77	kJ/mol	Joback Method
hvap	62.22	kJ/mol	Joback Method
log10ws	-0.72		Crippen Method
logp	0.606		Crippen Method
mcvol	107.050	ml/mol	McGowan Method
pc	5312.41	kPa	Joback Method
tb	453.30	K	Joback Method
tc	614.03	K	Joback Method
tf	256.45	K	Joback Method
vc	0.422	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	222.79	J/mol×K	453.30	Joback Method
cpg	230.74	J/mol×K	480.09	Joback Method
cpg	238.48	J/mol×K	506.88	Joback Method
cpg	245.99	J/mol×K	533.66	Joback Method
cpg	253.27	J/mol×K	560.45	Joback Method
cpg	260.30	J/mol×K	587.24	Joback Method
cpg	267.09	J/mol×K	614.03	Joback Method

# Sources

<b>McGowan Method:</b>	<a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>
<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C15507138&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C15507138&amp;Units=SI</a>
<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci990307l">http://pubs.acs.org/doi/abs/10.1021/ci990307l</a>
<b>Crippen Method:</b>	<a href="https://www.cheméo.com/doc/models/crippen_log10ws">https://www.cheméo.com/doc/models/crippen_log10ws</a>
<b>Joback Method:</b>	<a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>

# Legend

<b>cpg:</b>	Ideal gas heat capacity
<b>gf:</b>	Standard Gibbs free energy of formation
<b>hf:</b>	Enthalpy of formation at standard conditions
<b>hfl:</b>	Liquid phase enthalpy of formation at standard conditions
<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>mcvol:</b>	McGowan's characteristic volume
<b>pc:</b>	Critical Pressure
<b>tb:</b>	Normal Boiling Point Temperature
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>vc:</b>	Critical Volume

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