

# Undecyl sulfuric acid

<b>Inchi:</b>	InChI=1S/C11H24O4S/c1-2-3-4-5-6-7-8-9-10-11-15-16(12,13)14/h2-11H2,1H3,(H,12,13,
<b>InchiKey:</b>	OBYIEPMKXIBQEV-UHFFFAOYSA-N
<b>Formula:</b>	C11H24O4S
<b>SMILES:</b>	CCCCCCCCCCCCOS(=O)(=O)O
<b>Mol. weight [g/mol]:</b>	252.37
<b>CAS:</b>	4297-99-8

## Physical Properties

Property code	Value	Unit	Source
gf	-668.62	kJ/mol	Joback Method
hf	-1008.17	kJ/mol	Joback Method
hfl	-1061.00 ± 10.00	kJ/mol	NIST Webbook
hfus	40.90	kJ/mol	Joback Method
hvap	77.80	kJ/mol	Joback Method
log10ws	-3.65		Crippen Method
logp	3.337		Crippen Method
mvol	205.680	ml/mol	McGowan Method
pc	2393.53	kPa	Joback Method
tb	613.46	K	Joback Method
tc	771.74	K	Joback Method
tf	335.34	K	Joback Method
vc	0.815	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	544.46	J/mol×K	613.46	Joback Method
cpg	558.43	J/mol×K	639.84	Joback Method
cpg	571.85	J/mol×K	666.22	Joback Method
cpg	584.69	J/mol×K	692.60	Joback Method
cpg	596.98	J/mol×K	718.98	Joback Method
cpg	608.70	J/mol×K	745.36	Joback Method
cpg	619.86	J/mol×K	771.74	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=C4297998&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C4297998&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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