

# Ethynesulfenic acid

<b>Inchi:</b>	InChI=1S/C2H2OS/c1-2-4-3/h1,3H
<b>InchiKey:</b>	WVPHPPBOCBKHCG-UHFFFAOYSA-N
<b>Formula:</b>	C2H2OS
<b>SMILES:</b>	C#CSO
<b>Mol. weight [g/mol]:</b>	74.10
<b>CAS:</b>	121564-25-8

## Physical Properties

Property code	Value	Unit	Source
gf	85.33	kJ/mol	Joback Method
hf	102.00	kJ/mol	NIST Webbook
hfus	12.13	kJ/mol	Joback Method
hvap	43.40	kJ/mol	Joback Method
ie	8.86 ± 0.04	eV	NIST Webbook
log10ws	-1.15		Crippen Method
logp	0.783		Crippen Method
mcvol	52.660	ml/mol	McGowan Method
pc	7522.14	kPa	Joback Method
tb	396.24	K	Joback Method
tc	597.38	K	Joback Method
tf	254.49	K	Joback Method
vc	0.182	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	80.23	J/mol×K	396.24	Joback Method
cpg	82.78	J/mol×K	429.76	Joback Method
cpg	85.22	J/mol×K	463.29	Joback Method
cpg	87.54	J/mol×K	496.81	Joback Method
cpg	89.74	J/mol×K	530.33	Joback Method
cpg	91.83	J/mol×K	563.85	Joback Method
cpg	93.81	J/mol×K	597.38	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=C121564258&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C121564258&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>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>ie:</b>	Ionization energy
<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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