

Ammonium bisulfate

Other names:	ammonium hydrogensulphate
Inchi:	InChI=1S/H5NO4S/c1-5-6(2,3)4/h1H4,(H,2,3,4)
InchiKey:	BLCJRKAWVARSDX-UHFFFAOYSA-N
Formula:	H5NO4S
SMILES:	NOS(=O)(=O)O
Mol. weight [g/mol]:	115.11
CAS:	7803-63-6

Physical Properties

Property code	Value	Unit	Source
gf	-694.79	kJ/mol	Joback Method
hf	-747.34	kJ/mol	Joback Method
hfus	17.61	kJ/mol	Joback Method
hvap	63.96	kJ/mol	Joback Method
log10ws	0.53		Crippen Method
logp	-1.320		Crippen Method
mcvol	60.670	ml/mol	McGowan Method
pc	11537.21	kPa	Joback Method
tb	434.31	K	Joback Method
tc	611.70	K	Joback Method
tf	294.63	K	Joback Method
vc	0.228	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	118.85	J/molxK	434.31	Joback Method
cpg	122.34	J/molxK	463.87	Joback Method
cpg	125.80	J/molxK	493.44	Joback Method
cpg	129.19	J/molxK	523.00	Joback Method
cpg	132.51	J/molxK	552.57	Joback Method
cpg	135.73	J/molxK	582.13	Joback Method
cpg	138.84	J/molxK	611.70	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.cheméo.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=C7803636&Units=SI

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
h vap:	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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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