Ammonium sulfate

Other names:	ammonium sulphate
Inchi:	InChI=1S/H8N2O4S/c1-5-7(3,4)6-2/h1-2H4
InchiKey:	KTMPTTWZBSFVPI-UHFFFAOYSA-N
Formula:	H8N2O4S
SMILES:	NOS(=O)(=O)ON
Mol. weight [g/mol]:	132.14
CAS:	7783-20-2

Physical Properties

Property code	Value	Unit	Source	
gf	-596.52	kJ/mol	Joback Method	
hf	-693.54	kJ/mol	Joback Method	
hfus	2.85	kJ/mol	Phase transitions of some sulfur-containing ammonium salts	
hvap	60.33	kJ/mol	Joback Method	
log10ws	0.34		Crippen Method	
logp	-1.988		Crippen Method	
mcvol	70.650	ml/mol	McGowan Method	
рс	10348.87	kPa	Joback Method	
tb	437.08	K	Joback Method	
tc	635.89	K	Joback Method	
tf	339.30	К	Joback Method	
VC	0.256	m3/kmol	Joback Method	

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	144.70	J/mol×K	437.08	Joback Method
cpg	149.29	J/mol×K	470.22	Joback Method
cpg	153.87	J/mol×K	503.35	Joback Method
cpg	158.40	J/mol×K	536.49	Joback Method
cpg	162.86	J/mol×K	569.62	Joback Method
cpg	167.20	J/mol×K	602.76	Joback Method

Sources

Solubility of 6-Aminopenicillanic Acid in Aqueous Salt Solutions from 273.15 Khe stordy 50 kphase behavior of

Solid-liquid phase equilibria of

Phase Diagrams of Ammonium Sulfate + Ethanol/1-Propanol/2-Propanol + #ifest Abaebuay Invariate Abaebuay Invariate Segnific Atheobuay Invariate Ababbuay Systems at Segnific Atheobuay Invariate System Sulfates Interest System System Sulfates Interest System System Sulfates Interest System S

Thermal Conductivity and Density of (NH4)2SO4 + H2O, NH4NO3 + H2O, and (NH4)2SO4 + H2O, NH4NO3 + H2O, and (NH4)2SO4 + H2O at T = (303.15 and 313.15) K and p = 0.1 MPa:

https://www.doi.org/10.1021/je700284r **Khe Sugy pKphase behavior of** aqueous two-phase system containing the sugression of the second state and were on state in the second state and the solution is containing [Brinn]BF4 and animical in the second state is containing and the second state is contained and the secon https://www.doi.org/10.1016/j.fluid.2014.09.029 https://www.doi.org/10.1021/acs.jced.7b01015 https://www.doi.org/10.1016/j.tca.2010.01.020 https://www.doi.org/10.1016/j.jct.2013.08.018 http://link.springer.com/article/10.1007/BF02311772 https://www.doi.org/10.1016/j.jct.2017.04.010 Solid-liquid phase equilibria of quaternary system NH4(+)//C1(-), Beasure merod (-) Provide and reperties and systemation 4(-)//C for the provide and systematic for the provide and syste http://webbook.nist.gov/cgi/cbook.cgi?ID=C7783202&Units=SI https://www.doi.org/10.1021/je900504e https://www.doi.org/10.1021/acs.jced.8b00188 https://www.doi.org/10.1021/je060335h https://www.doi.org/10.1016/j.fluid.2014.06.013 N-butyipyridinumterratiuoroborate and Grippian Meydedgen phosphate/sodiumchloride/sodium bhosphate/sodiumchloride/sodium chaste/artificity and point of the aqueous complete and a current of the aqueous complete and a curre http://pubs.acs.org/doi/abs/10.1021/ci990307I https://www.chemeo.com/doc/models/crippen_log10ws

Refractive Indices of Sodium, Potassium, and Ammonium Sulfates in Etigentive and Solitengagement of 1-alkyl-3-methylimidazolium chloride ionat mouras by convintinouga Actand advetteylane.glycol 2000 and sulphate States chapterings of the quaternary system K+, NH4+//Cl-, SO4(2-)-H2O at Sptid Signad etwiliblio Mctateon: CO(NH2)2-MgSO4-(NH4)2SO4-H2O system K+0 do do 25 C:

MgF2 Solubility in MgF2 + Salt + H2O Systems (Salt = MgSO4, (NH4)2SO4, NHAREN transpire of some sulfur-containing ammonium salts: Aqueous biphasic systems involving alkylsulfate-based ionic liquids: The effect of ammonium sulfate on the solubility of amino acids in water at (298.15 and 323.15) K:

https://www.doi.org/10.1021/je9010129 https://www.doi.org/10.1016/j.jct.2015.04.004 https://www.doi.org/10.1016/j.jct.2013.10.015 https://www.doi.org/10.1016/j.jct.2019.03.003 https://www.doi.org/10.1016/j.fluid.2017.05.002 https://en.wikipedia.org/wiki/Joback_method https://en.wikipedia.org/wiki/Joback_method https://www.doi.org/10.1021/acs.jced.8b00772 https://www.doi.org/10.1016/j.tca.2014.08.035 https://www.doi.org/10.1016/j.jct.2011.04.024 https://www.doi.org/10.1016/j.jct.2008.09.019

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

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