Acetic acid, sodium salt

Other names:	anhydrous sodium acetate
	sodium acetate
	sodium ethanoate
Inchi:	InChI=1S/C2H4O2.Na/c1-2(3)4;/h1H3,(H,3,4);/q;+1/p-1
InchiKey:	VMHLLURERBWHNL-UHFFFAOYSA-M
Formula:	C2H3NaO2
SMILES:	CC(=O)O[Na]
Mol. weight [g/mol]:	82.03
CAS:	127-09-3

Physical Properties

Property code	Value	Unit	Source
hfus	17.40	kJ/mol	Enthalpies of formation and lattice enthalpies of alkaline metal acetates
ss	138.10	J/mol×K	NIST Webbook
ss	123.09	J/mol×K	NIST Webbook
tf	601.30 ± 0.20	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cps	100.83	J/mol×K	298.15	NIST Webbook
cps	111.70	J/mol×K	340.00	NIST Webbook
cps	88.07	J/mol×K	291.18	NIST Webbook

Sources

Molar Volumes and Heat Capacities of Aqueous Solutions of Short-Chain Aliphatic Sodium Carboxylates at 25 deg C	https://www.doi.org/10.1021/je200964m
Solubilities of imidazolium-based ionic liquids in aqueous salt solutions at 298.15 K	https://www.doi.org/10.1016/j.jct.2011.03.002
Measurement and Calculation of Solubilities in the Ternary System $NaCH_3COO + NaCl + H_2O$ from 278 K to 343 K	https://www.doi.org/10.1021/je7001495
The vapor pressures over saturated aqueous solutions of sodium and potassium acetates, chlorates, and perchlorates:	https://www.doi.org/10.1016/j.jct.2006.12.006

Influence of Different Inorganic Salts on the Ionicity and Thermophysical Properties of 1-Ethyl-3-methylimidazolium Acetate Ionic Liquid:	https://www.doi.org/10.1021/je5008857
Influence of electrolytes on liquid-liquid equilibria of water/1-butanol and on the partitioning of 5-hydroxymethylfurfural in water/1-butanol:	https://www.doi.org/10.1016/j.fluid.2016.05.001
Effect of Salt Type and Alkyl Chain Length on the Binodal Curve of an Aqueous Two-Phase System Composed of Imidazolium Ionic Liquids:	https://www.doi.org/10.1021/acs.jced.8b00188
Phase diagram of ionic liquid aqueous two-phase systems with N-butylpyridinium tetrafluoroborate, ammonium citrate/sodium acetate, and water from 308.15 K to 328.15 K:	https://www.doi.org/10.1016/j.tca.2016.03.030
Volumetric Behavior and Interactions of a-Amino Acids with Sodium Acetate, Potassium Acetate, and Calcium Acetate in Aqueous Solutions:	https://www.doi.org/10.1021/je100190e
Low-temperature heat capacities and standard molar enthalpy of formation of sodium benzoate C6H5COONa (s):	https://www.doi.org/10.1016/j.tca.2008.12.029
Physico-Chemical Properties of LiFSI Solutions I. LiFSI with Valeronitrile, Dichloromethane, 1,2-Dichloroethane, and 1,2-Dichlorobenzene:	https://www.doi.org/10.1021/acs.jced.8b00590
Bubble points of the systems isopropanol-water, isopropanol-water-sodium acetate and isopropanol-water-sodium oleate at high pressure:	https://www.doi.org/10.1016/j.fluid.2006.03.021
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C127093&Units=SI
Viscosity Behavior of alpha-Amino Acids in Acetate Salt Solutions at Temperatures (303.15 to 323.15) K:	https://www.doi.org/10.1007/s10765-011-1111-y
Solubility of Sodium Acetate in Binary Mixtures of Methanol, 1-Propanol, Acetonitrile, and Water at 298.2 K:	https://www.doi.org/10.1021/je400625f
Ion-association and solvation behavior of some alkali metal acetates in aqueous 2-butanol solutions at T = 298.15, 303.15 and 308.15 K:	https://www.doi.org/10.1016/j.fluid.2011.05.017
Liquid-Liquid Equilibrium of Alcohols + Ammonium/Potassium/Sodium Acetate + Water Systems: Experimental and Correlation:	https://www.doi.org/10.1021/acs.jced.5b00200
Volumetric Properties of Some a,w-Aminocarboxylic Acids in Aqueous Sodium Acetate and Magnesium Acetate Solutions at T = (288.15 to 318.15) K:	https://www.doi.org/10.1021/je100476h
Equilibria in the Ternary System NaCl NaAc H2O at 303.15 K, 323.15 K, and 348.15 K:	https://www.doi.org/10.1021/je500768w
Volumetric and conductometric studies on the interactions of dipeptides with sodium acetate and sodium butyrate in aqueous solutions at T = 298.15 K:	https://www.doi.org/10.1016/j.jct.2009.06.010
Liquid-liquid equilibria of ionic liquid 1-butyl-3-methylimidazolium tetrafluoroborate and sodium citrate/tartrate/acetate aqueous two-phase systems at 298.15 K: Experiment and correlation:	https://www.doi.org/10.1016/j.fluid.2010.03.044
Aqueous Biphasic Systems Composed of Ionic Liquids and Acetate-Based Salts: Phase Diagrams, Densities, and Viscosities:	https://www.doi.org/10.1021/je501044u
Isobaric Vapor-Liquid Equilibria for Water + Acetic Acid + Sodium Acetate:	https://www.doi.org/10.1021/je0255123
Salt influence on MIBK/water liquid-liquid equilibrium: Measuring and modeling with ePC-SAFT and COSMO-RS:	https://www.doi.org/10.1016/j.fluid.2015.11.018
Conductivity is a contrivance to explore ion-pair and triple-ion structure of ethanoates in tetrahydrofuran, dimethyl sulfoxide and their binaries:	https://www.doi.org/10.1016/j.fluid.2012.02.013
Enthalpies of formation and lattice enthalpies of alkaline metal acetates:	https://www.doi.org/10.1016/j.tca.2004.11.004
Activity of Water and Osmotic Coefficients for Two- and Three-Basic Amino Acid Ternary Solutions:	https://www.doi.org/10.1021/je300701m
Phase Behavior of Aqueous Biphasic Systems Composed of Ionic Liquids and Organic Salts:	https://www.doi.org/10.1021/je500419b

Legend

cps:	Solid phase heat capacity
hfus:	Enthalpy of fusion at standard conditions
ss:	Solid phase molar entropy at standard conditions
tf:	Normal melting (fusion) point