sodium hydroxide

Inchi:	InChI=1S/Na.H2O/h;1H2/q+1;/p-1
InchiKey:	HEMHJVSKTPXQMS-UHFFFAOYSA-M
Formula:	HNaO
SMILES:	O[Na]
Mol. weight [g/mol]:	40.00
CAS:	1310-73-2

Physical Properties

Property code	Value	Unit	Source
affp	1071.80	kJ/mol	NIST Webbook
basg	1044.80	kJ/mol	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.51741e+01
Coeff. B	-1.75145e+04
Coeff. C	7.01000e+00
Temperature range (K), min.	773.15
Temperature range (K), max.	1873.15

Sources

Thermodynamics of proton dissociations from aqueous alanine at temperatures from (278.15 to 393.15) K, and at the pressure 0.39 MPa: Apparent molar heat capacities and apparent molar volumes of glycine, glycinium chloride, and sodium glycinate:	https://www.doi.org/10.1016/j.jct.2005.10.007
Thermodynamics of the first and second proton dissociations from aqueous glycine at temperatures from (278.15 to 393.15) K, and at the pressure 0.39 MPa: Apparent molar heat capacities and apparent molar volumes of zwitterionic, protonated cationic, and deprotonated anionic forms at molalities from 0.002 to 1.0 mol Ae kg-1, and at the pressure 0.38 MPa: Apparent molar heat capacities and apparent molar volumes of glycine, glycinium chloride, and sodium glycinate:	https://www.doi.org/10.1016/j.jct.2006.08.008
Densities of NaOH(aq) at Temperatures from 13 K to 673 K and 100 MPa 15 to 30 MPa: Water Dissociation Constant at 0.35 MPa: NaOH Aqueous Solutions for a Thermodynamic Description:	https://www.doi.org/10.1021/je700265d
Thermodynamics of the first and second proton dissociations from aqueous alanine at temperatures from (278.15 to 393.15) K, and at the pressure 0.39 MPa: Apparent molar heat capacities and apparent molar volumes of zwitterionic, protonated cationic, and deprotonated anionic forms at molalities from 0.002 to 1.0 mol Ae kg-1, and at the pressure 0.38 MPa: Apparent molar heat capacities and apparent molar volumes of glycine, glycinium chloride, and sodium glycinate:	https://www.doi.org/10.1021/acs.jced.9b00536
	https://www.doi.org/10.1016/j.jct.2005.06.017
	https://www.doi.org/10.1016/j.tca.2013.06.008

Measurement and Correlation for the Solubility of Sodium p-Toluenesulfonate, Sodium Sulfite, and Sodium Sulfate in Aqueous Ethanol Solutions:	https://www.doi.org/10.1021/acs.jced.7b01089
Thermal properties of alkaline sodium phenoxide solutions:	https://www.doi.org/10.1016/j.tca.2008.03.009
Densities and Heat Capacities of the Aqueous Sodium Hydroxide Solutions Ammonia + Water + NaOH and Ammonia + Water + KOH Solutions:	https://www.doi.org/10.1021/je050512z
Cs alkylated phenoxides:	https://www.doi.org/10.1016/j.tca.2005.02.027
Density Calculations for (Na, K)BH4 + (Na, K)BO2 + (Na, K)OH + H2O Solutions Used in Hydrogen Power Engineering:	https://www.doi.org/10.1021/je200216n
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
A Comprehensive Model of Synthetic Bayer Liquors. Part 2. Densities of Alkaline Aluminate Solutions to 90 deg C:	https://www.doi.org/10.1021/je0500126
Effects of NaOH and Ethanol on the Solubility of Disodium Decanedioate in Water:	https://www.doi.org/10.1021/je201351a
Isopiestic Measurements of Osmotic and Activity Coefficients of Weak barium and sodium hydroxide using an ion exchange method and its uncertainty assessment:	https://www.doi.org/10.1021/acs.jced.8b00400
MgCl2-NH4Cl-H2O Systems at 303.15 K:	https://www.doi.org/10.1016/j.jct.2018.08.037
Vapor-Liquid Equilibria of Ammonia + Water + Potassium Hydroxide and Ammonia + Water + Sodium Hydroxide Solutions at Temperatures from (293.15 to 353.15) K:	https://www.doi.org/10.1021/je049708+
Phase diagram for Na2SO4-NaOH-H2O system and Na2SO4 solubility in NaOH/KOH solutions at 12 and 25 at 80 deg C:	https://www.doi.org/10.1021/je301267r
Thermodynamics of proton dissociations from aqueous L-methionine at temperatures from (278.15 to 393.15) K, molalities from (0.0125 to 1.0) mol Ae kg 1, and at the pressure 0.33 MPa. Apparent molar heat capacities and apparent molar volumes of L-methionine.	https://www.doi.org/10.1016/j.jct.2006.07.018
Thermochemistry of 1-bromoadamantane in binary mixtures acetonitrile + dodecane and apparent molar volumes of L-methionine.	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1310732&Units=SI
Phase Equilibrium Data for the H2O + NaOH + Polyethylene Glycol 200 System. Application to the Extraction of N-Methylpyrrolidine:	https://www.doi.org/10.1016/j.tca.2005.11.035
Solubility of Carbon Dioxide in Water and Solutions at temperatures from 273.15 to 353.15 K, molalities from 0.001 to 1.0 mol kg-1, and at the pressure 0.1 MPa. Apparent molar volumes of CO2 in aqueous solutions.	https://www.doi.org/10.1016/j.fluid.2014.07.019
Solubilities of betulin and betulinic acid in sodium hydroxide aqueous solutions at temperatures from (293.15 to 353.15) K:	https://www.doi.org/10.1016/j.jct.2006.05.013
Solubility of Fluorite in Aqueous Solutions at Temperatures from (298.15 to 353.15) K:	https://www.doi.org/10.1021/je200991x
NaCl-Na2SO4-Na2CO3-NaOH-H2O SYSTEM at 298.15 K: Solubility, Density, and Sodium Formate on the Liquid-Liquid Equilibrium of Polyoxymethylene Dimethyl Ether 3 Solution:	https://www.doi.org/10.1016/j.jct.2013.07.014
Solubilities of imidazolium-based ionic liquids in aqueous salt solutions at 298.15 K:	https://www.doi.org/10.1021/acs.jced.5b00443
Electrical Conductivity of Electrolytes Found In Natural Waters from (5 to 90) deg C:	https://www.doi.org/10.1021/acs.jced.9b00081
Solubility of Sodium Oxalate in Concentrated Electrolyte Solutions:	https://www.doi.org/10.1016/j.jct.2011.03.002
Thermodynamics of proton dissociations from aqueous serine at temperatures from (278.15 to 393.15) K, molalities from (0.0125 to 1.0) mol Ae kg 1, and at the pressure 0.33 MPa. Apparent molar heat capacities and apparent molar volumes of serine.	https://www.doi.org/10.1021/je101012n
Solubility of 2,6-Diaminopyridine in Toluene + Xylene + Ethylbenzene:	https://www.doi.org/10.1021/acs.jced.7b00690
The standard molar enthalpy of the base catalysed hydrolysis of methyl benzoate in water. Modelling of solubility for calcium sulfate dihydrate and calcium hydroxide in NaOH/KOH solutions :	https://www.doi.org/10.1016/j.jct.2005.07.019
Solubility of Sodium Propionate and Sodium Propionate + Propionic Acid in Ethanol + Water Mixtures at 298.15 K:	https://www.doi.org/10.1021/je700221w
Apparent molar volumes of serine, serinium chloride, and sodium serinate:	https://www.doi.org/10.1016/j.jct.2016.07.042
	https://www.doi.org/10.1016/j.fluid.2010.06.012

Legend

affp:	Proton affinity
basg:	Gas basicity
pvap:	Vapor pressure

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