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

Solubilities of betulin and betulinic acid in sodium hydroxide aqueous solutions of varied mole fraction at temperatures from 283.2 K to 323.2 K:	https://www.doi.org/10.1016/j.jct.2013.07.014
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Measurement and Correlation for the Solubility of Sodium p-Toluenesulfonate, Sodium Sulfite, and Sodium p-Methylphenoxide in Aqueous Sodium Hydroxide Solutions and Sodium Sulfite in Aqueous Ethanol Solutions:	https://www.doi.org/10.1021/acs.jced.7b01089
Experimental solid-liquid-liquid equilibrium data for the H2O + NaOH + pyridine ternary system: Application to the extraction of pyridine from aqueous solutions:	https://www.doi.org/10.1016/j.fluid.2014.07.019
Thermodynamics of the first and second proton dissociations from aqueous L-aspartic acid and L-glutamic acid at temperatures from (278.15 to 393.15) K and at the pressure 0.35 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:	https://www.doi.org/10.1016/j.jct.2006.08.008
Isopiestic Measurements of Osmotic and Activity Coefficients of NiCl2-NH4Cl-H2O Systems at 308.15 K:	https://www.doi.org/10.1021/acs.jced.8b00400

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 Equilibria of the NaOH-NaBO2-Na2CO3-H2O System at 20 deg C, 60 deg C, and 100 deg C:	https://www.doi.org/10.1021/acs.jced.5b00443
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
Thermodynamics of proton dissociations from aqueous serine at temperatures from (278.15 to 393.15) K, molalities from (0.01 up to 1.0) mol Ae kg-1, and at the pressure 0.35 MPa: Apparent molar heat capacities and apparent molar volumes of serine, serinium chloride, and sodium serinate:	https://www.doi.org/10.1016/j.jct.2005.07.019
Solubility of 2,6-Diaminopyridine in Toluene, o-Xylene, Ethylbenzene, Methanol, Ethanol, 2-Propanol, and Sodium Hydroxide Solutions:	https://www.doi.org/10.1021/je700221w
Salting Effect of Sodium Hydroxide and Sodium Formate on the Liquid-Liquid Equilibrium of Polyoxymethylene Dimethyl Ethers in Aqueous Solution:	https://www.doi.org/10.1021/acs.jced.9b00081
Phase diagram of Na2CO3-NaOH-H2O System and Na2SO4 solubility in sodium aluminate solution with caustic ratios of 12 and 15 at 80 deg C:	https://www.doi.org/10.1021/je301267r
Solubility of Sodium Oxalate in Concentrated Electrolyte Solutions:	https://www.doi.org/10.1021/acs.jced.7b00690
Electrical Conductivity of Electrolytes Found In Natural Waters from (5 to 90) deg C:	https://www.doi.org/10.1021/je101012n
Effects of NaOH and Ethanol on the Solubility of Disodium Decanedioate in Water:	https://www.doi.org/10.1021/je201351a
Measurement and modelling of solubility for calcium sulfate dihydrate and calcium hydroxide in NaOH/KOH solutions:	https://www.doi.org/10.1016/j.fluid.2010.06.012
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
Thermodynamics of proton dissociations from aqueous threonine and isoleucine at temperatures from (278.15 to 393.15) K, molalities from (0.01 to 1.0) mol*kg-1, and at the pressure 0.35 MPa: Apparent molar heat capacities and apparent molar volumes of zwitterionic, protonated cationic and deprotonated anionic forms:	https://www.doi.org/10.1016/j.jct.2006.05.013
Thermochemistry of 1-bromoadamantane in binary mixtures of water-organic solvent:	https://www.doi.org/10.1016/j.tca.2005.11.035
Liquid-liquid equilibria of hydrophilic alcohol + sodiumhydroxide + water systems: Experimentation and correlation:	https://www.doi.org/10.1016/j.tca.2013.06.008
Thermodynamics of proton dissociations from aqueous glycine at temperatures from 278.15 to 393.15 K, molalities from 0 to 1.0 mol.kg-1, and at the pressure 0.35 MPa: Apparent molar heat capacities and apparent molar volumes of glycine, glycinium chloride, and sodium glycinate:	https://www.doi.org/10.1016/j.jct.2005.06.017
The heat capacities of alkaline sodium borohydride solutions:	https://www.doi.org/10.1016/j.tca.2008.03.009
Weak barium and radium hydrolysis using an ion exchange method and its uncertainty assessment:	https://www.doi.org/10.1016/j.jct.2018.08.037
Densities of NaOH(aq) at Temperatures from (323 to 573) K and 10 MPa Pressure:	https://www.doi.org/10.1021/je700265d
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 0.35 MPa: Apparent molar heat capacities and apparent molar volumes of L-methionine, methioninium chloride, and sodium methioninate:	https://www.doi.org/10.1016/j.jct.2006.07.018
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
Densities and Heat Capacities of the Ammonia + Water + NaOH and Ammonia + Water + KOH Solutions:	https://www.doi.org/10.1021/je050512z
New Concentration Correlations of NaOH Aqueous Solutions for a Thermodynamic Process:	https://www.doi.org/10.1021/acs.jced.9b00536
Solubility of Carbon Dioxide in Water and Aqueous Solution Containing Sodium Hydroxide at Temperatures from (293.15 to 393.15) K and Pressure up to 5 MPa: Experimental Measurements:	https://www.doi.org/10.1021/je200991x
Thermochemistry of Li, Na, K, Rb and Cs alkylated phenoxides:	https://www.doi.org/10.1016/j.tca.2005.02.027
Thermodynamics of proton dissociations from aqueous alanine at temperatures from (278.15 to 393.15) K, molalities from (0.0075 to 1.0) mol*kg-1, and at the pressure 0.35 MPa: Apparent molar heat capacities and apparent molar volumes of alanine, alaninium chloride, and sodium alaninate:	https://www.doi.org/10.1016/j.jct.2005.10.007
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1310732&Units=SI
The standard molar enthalpy of the base catalysed hydrolysis of methyl paraben revisited:	https://www.doi.org/10.1016/j.jct.2016.07.042

Legend

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