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 the first and second proton dissociations from aqueous L-aspartic acid and L-glutamic acid at temperatures from 278.15 to 333.15 K and at the pressure 0.35 MPa:	https://www.doi.org/10.1016/j.jct.2006.08.008
Measurement and modelling of solubility for calcium sulfate dihydrate in aqueous NaOH/KOH:	https://www.doi.org/10.1016/j.fluid.2010.06.012
Thermodynamics of proton dissociations from aqueous glycine at temperatures from 278.15 to 333.15 K and at the pressure 0.35 MPa:	https://www.doi.org/10.1016/j.jct.2005.06.017
Volumetric molal heat capacities and apparent molar volumes of zwitterionic, alcoholic, sodium hydroxide and tetraethylammonium bromide at 298.15 K and at the pressure 0.35 MPa:	https://www.doi.org/10.1016/j.tca.2013.06.008
Volumetric molal heat capacities and apparent molar volumes of glycine, glycinium chloride, and sodium glycinate:	https://www.doi.org/10.1021/acs.jced.5b00443
Volumetric molal heat capacities and apparent molar volumes of glycine, glycinium chloride, and sodium borohydride solutions:	https://www.doi.org/10.1016/j.tca.2008.03.009

Electrical Conductivity of Electrolytes Found In Natural Waters from (5 to 90) deg.C	https://www.doi.org/10.1021/je101012n
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 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:	https://www.doi.org/10.1016/j.jct.2006.07.018
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1310732&Units=SI
Weak barium and radium hydrolysis using an ion-exchange method and its thermodynamics:	https://www.doi.org/10.1016/j.jct.2018.08.037
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Densities of NaOH(aq) at Temperatures from (323 to 373) K and 100 kPa Pressure:	https://www.doi.org/10.1021/je700265d
Effect of NaOH and Ethanol on the Solubility of Disodium Decanedioate in Water:	https://www.doi.org/10.1021/je201351a
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 threonine and isoleucine at temperatures from (278.15 to 393.15) K, molalities from (0.01 to 1.0) mol Ae kg-1, and at the pressure 0.35 MPa: Apparent molar heat capacities and apparent molar volumes of threonine and isoleucine:	https://www.doi.org/10.1016/j.jct.2006.05.013
A Comprehensive Model of Synthetic Beer 4 (ugrs.) Part 2. Densities of solutions of ethanol + water + NaOH + NaCl at 0.35 MPa and the temperature 298.15 K:	https://www.doi.org/10.1021/je0500126
Solubility of Parabens in Pure Water and Aqueous Solutions of Ethanol at 298.15 K:	https://www.doi.org/10.1021/je700221w
Toluene, o-Xylene, Ethylbenzene, Methanol, Ethanol, 2-Propanol, and Water + Sodium Hydroxide Solutions: Measurement and Correlation of Mutual Solubilities:	https://www.doi.org/10.1021/acs.jced.8b00400
Molar Heat Capacities and apparent molar volumes of aqueous solutions of NaOH and KOH at 0.35 MPa and 298.15 K:	https://www.doi.org/10.1016/j.jct.2016.07.042
Acidic and deprotonated anionic base catalysed hydrolysis of methyl paraben revisited:	https://www.doi.org/10.1021/acs.jced.7b01089
Measurement and Correlation for the Solubility of Sodium p-Toluenesulfonate, Sodium Sulfite, and Sodium 4-Methylphenoxide in Aqueous Sodium Hydroxide Solutions:	https://www.doi.org/10.1021/je200216n
Density Calculations for (Na, K)BH4 + (Na, K)BO2 + (Na, K)OH + H2O Solutions:	https://www.doi.org/10.1021/je050512z
Densities and Vapor Pressures of the Aqueous Sodium Malate + Water + NaOH and Disodium Malate + Water + NaOH Systems at 298.15 K:	https://www.doi.org/10.1016/j.fluid.2014.07.019
Experimental Vapor-Liquid Equilibrium Data for the Ethanol + Water + KOH Solutions:	https://www.doi.org/10.1021/acs.jced.9b00081
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/je200991x
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 Measurement and Thermodynamic Modeling:	https://www.doi.org/10.1021/acs.jced.9b00536
1-bromoadamantane in binary mixtures of water aprotic solvent:	https://www.doi.org/10.1016/j.tca.2005.11.035
Solubility of Sodium Oxalate in Concentrated Electrolyte Solutions:	https://www.doi.org/10.1021/acs.jced.7b00690
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 Aqueous Solutions for a Thermochemistry of process:	https://www.doi.org/10.1021/je301267r
Thermodynamics of proton dissociations from aqueous alanine at temperatures from (278.15 to 393.15) K, molalities from (0.01 and 1.0) mol Ae kg-1, and the pressure 0.35 MPa: Apparent molar heat capacities and apparent molar volumes of alanine, alanium chloride, and sodium alaninate:	https://www.doi.org/10.1016/j.jct.2005.10.007
Solubilities of benzoic and benzoic acid in sodium hydroxide aqueous solutions at temperatures from (278.15 to 393.15) K:	https://www.doi.org/10.1016/j.jct.2013.07.014
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

Legend

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