sodium bromide

Inchi: InChI=1S/BrH.Na/h1H;/q;+1/p-1
InchiKey: JHJLBTNAGRQEKS-UHFFFAOYSA-M
Formula: BrNa
SMILES: [Br-].[Na+]
Mol. weight [g/mol]: 102.89
CAS: 7647-15-6

Physical Properties

Property code	Value	Unit	Source
ea	0.94	eV	NIST Webbook
ea	0.79 ± 0.01	eV	NIST Webbook
ie	8.30 ± 0.10	eV	NIST Webbook
ie	8.30 ± 0.10	eV	NIST Webbook
ie	8.70	eV	NIST Webbook
ie	8.30 ± 0.10	eV	NIST Webbook
tt	1114.00	K	Study of the NaBr DyBr3 phase diagram by differential thermal analysis

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.53489e+01
Coeff. B	-1.64472e+04
Coeff. C	-1.31070e+02
Temperature range (K), min.	1020.00
Temperature range (K), max.	1720.00

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C7647156&Units=SI

Activity Coefficients and Volumetric Properties for the NaBr + Maltose + Water System at 298.15 K: https://www.doi.org/10.1021/je050064v

Solubility of salicylic acid in water + salt (NaCl, KCl, NaBr, Na2SO4 and K2SO4) at 293.5 to 313.3 K: https://www.doi.org/10.1016/j.fluid.2012.06.024

Study of Solution Properties of Some Alkali Bromides in Aqueous Binary Mixtures of 1,3-Dioxolane in View of Different Models: https://www.doi.org/10.1021/je900709n

Effect of Electrolyte and Temperature on Micellization Behavior of N-Ethyl-N,N-dimethyl-1-hexadecanaminium Bromide: https://www.doi.org/10.1021/je500173y

Phase equilibria in the ternary systems KBr-MgBr2-H2O and NaBr-MgBr2-H2O at 348.15 K: https://www.doi.org/10.1016/j.fluid.2015.02.015

Experimental study of the solubilities of salts in the systems Na2B4O7 - NaBr - H2O and Na2B4O7 - Na2SO4 - NaBr - H2O at 323 K: https://www.doi.org/10.1016/j.fluid.2013.10.047

Study on solid-liquid phase equilibria in ionic liquid 2. The solubility of alkali bromide in ionic liquid 1-ethyl-3-methylimidazolium ethyl sulfate: https://www.doi.org/10.1016/j.fluid.2007.03.008

Apparent molar volumes and compressibilities of selected electrolytes in dimethylsulfoxide: https://www.doi.org/10.1016/j.jct.2010.07.003

Solubility of NaCl, NaBr, and KCl in Water, Methanol, Ethanol, and Their Mixed Solvents: https://www.doi.org/10.1021/je049922y

Density of ethanolic alkali halide salt solutions by experiment andmolecular simulation: https://www.doi.org/10.1016/j.fluid.2015.08.005

Solid Liquid Equilibria in the Systems CaBr2 MgBr2 H2O and NaBr KBr SrBr2 at 348 K: https://www.doi.org/10.1021/acs.jced.5b00112

Thermal Conductivity of Binary Aqueous NaBr and KBr and Ternary H2O + NaBr + KBr Solutions at Temperatures from (294 to 577) K and Pressures up to 40 MPa: https://www.doi.org/10.1021/je049814b

Measurement and Thermodynamic Modeling Study on Solid and Liquid Equilibrium of Ternary System NaBr-CaBr2-H2O at 288.15 K: https://www.doi.org/10.1021/je500881x

Solubility of n-Hexane and Setchenov's Constants in Aqueous Solutions of KCl, NaCl, NaBr, and NaNO3: https://www.doi.org/10.1021/acs.jced.9b00384

(Solid + Liquid) Phase Equilibria in the Quaternary System (NaBr + MgBr2 + CaBr2 + H2O) at 298.15 K: https://www.doi.org/10.1021/acs.jced.8b00291

Density of Methanolic Alkali Halide Salt Solutions by Experiment and Molecular Simulation: https://www.doi.org/10.1021/je5009944

Enthalpies of Dilution of (2S,3R,4R,5R)-Hexane-1,2,3,4,5,6-hexol in Water and Aqueous Sodium Halide Solutions at T = (293.15 to 318.15) K: https://www.doi.org/10.1021/je1007394

Self-assembled nano structures of cationic ester-containing gemini surfactants: The surfactant structure and salt effects: https://www.doi.org/10.1016/j.jct.2013.03.008

Experimental study of the excess molar volume of ternary mixtures containing {water + (1,2-propanediol, or 1,3-propanediol, or 1,2-butanediol, or 1,3-butanediol, or 1,4-butanediol, or 2,3-butanediol) + electrolytes} at a temperature of 298.15 K and atmospheric pressure: https://www.doi.org/10.1016/j.jct.2009.11.018

Calorimetric Investigation of PrBr3-MBr Liquid Mixtures (M = Na, K, Rb, Cs): https://www.doi.org/10.1021/je200419x

Investigation of Surface Properties for Electrolyte Solutions: Measurement and Prediction of Surface Tension for Aqueous Concentrated Electrolyte Solutions: https://www.doi.org/10.1021/acs.jced.7b00503

Measurements of the Solid Liquid Phase Equilibria in Quinary System NaBr KBr MgBr2 SrBr2 H2O at 323 K: https://www.doi.org/10.1021/acs.jced.9b00225

Thermodynamic study of (sodium bromide + monosodium aspartate + water) system based on potentiometric measurements at T = (298.2 and 310.2) K: https://www.doi.org/10.1016/j.fluid.2017.04.016

Measuring and modeling aqueous electrolyte/amino-acid solutions with ePC-SAFT: https://www.doi.org/10.1016/j.jct.2013.08.018

Electrical Conductances of Tetrabutylammonium Bromide, Sodium Tetraphenylborate, and Sodium Bromide in N,N-Dimethylformamide at (308.15, 313.15, 318.15, and 323.15) K: https://www.doi.org/10.1021/je801001h

Apparent molar volumes and apparent molar heat capacities of aqueous sodium bromide and sodium iodide at temperatures from (278.15 to 393.15) K and at the pressure 0.35 MPa: https://www.doi.org/10.1016/j.jct.2003.10.008

Solubility and Thermodynamics of Solute-Solvent Interactions of Some Amino Acids in Aqueous Sodium Bromide and Potassium Bromide Solutions: https://www.doi.org/10.1021/acs.jced.7b00647

Apparent molar volumes, expansibilities, and isentropic compressibilities of selected electrolytes in methanol: https://www.doi.org/10.1016/j.jct.2008.04.008

Electrical Conductances of Tetrabutylammonium Bromide, Sodium Tetraphenylborate, and Sodium Bromide in Ethylene Glycol (1) + Water (2) Mixtures at (298.15, 303.15, 308.15, and 318.15) K: https://www.doi.org/10.1021/je9000697

Solid Liquid Equilibria in the Quaternary Systems NaBr KBr MgBr2 H2O and KBr SrBr2 MgBr2 H2O at 323 K: https://www.doi.org/10.1021/acs.jced.6b00799

Electrical Conductances of Tetrabutylammonium Bromide, Sodium Tetraphenylborate, and Sodium Bromide in Methanol (1) + Water (2) Mixtures at (298.15, 308.15, and 318.15) K: https://www.doi.org/10.1021/je0600810

Effect of Counterions on Micellization of Pyrrolidinium Based Silicone Ionic Liquids in Aqueous Solutions: https://www.doi.org/10.1021/je401118k

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Enthalpic pairwise self-association of L-carnitine in aqueous solutions of some alkali halides at T = 298.15 K: https://www.doi.org/10.1016/j.jct.2015.11.028

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

Solubility of Sodium Salts in Ammonium-Based Deep Eutectic Solvents: https://www.doi.org/10.1021/je400045d

Solid Liquid Equilibria in the Ternary Systems KBr CaBr2 H2O and NaBr CaBr2 H2O at 348 K: https://www.doi.org/10.1021/je500681m

Temperature Dependence of the Density of Aqueous Alkali Halide Salt Solutions by Experiment and Molecular Simulation: https://www.doi.org/10.1021/je500420g

Effect of NaBr, KCl, KBr, and MgCl2 on Viscosities of Aqueous Glycine and L-Alanine Solutions at 298.15 K:	https://www.doi.org/10.1021/je050048y
Apparent Molar Compressibilities and Volumes of Some 1,1-Electrolytes in N,N-Dimethylacetamide and N,N-Dimethylformamide:	https://www.doi.org/10.1021/je060301+
Conductometric study of some alkali metal halides in (dimethyl sulfoxide + acetonitrile) at T = 298.15 K:	https://www.doi.org/10.1016/j.jct.2009.03.005
Solubility of NaBr, NaCl, and KBr in Surfactant Aqueous Solutions:	https://www.doi.org/10.1021/je100905g
Measurements of (Solid + Liquid) Phase Equilibria in the Quaternary System NaBr + KBr + SrBr2 + H2O and Two Subsystems NaBr + SrBr2 + H2O and KBr + SrBr2 + H2O at T = 323 K:	https://www.doi.org/10.1021/acs.jced.7b00273
Vapor Pressures of Aqueous Soulutions with Mixed Salts of NaCl + KBr and NaBr + KCl:	https://www.doi.org/10.1021/je020144o
Conductance Studies of NaCl, KCl, NaBr, NaI, NaBPh4, and Bu4NI in Water + 2-Ethoxyethanol Mixtures at 298.15 K:	https://www.doi.org/10.1021/je9006184
Conductance Studies of Tetrabutylammonium Bromide, Sodium Bromide, and Sodium Tetraphenylborate in 2-Butoxyethanol (1) + Water (2) Mixtures at (298.15, 303.15, 308.15, and 313.15) K:	https://www.doi.org/10.1021/je300737t
Solvation of Basic and Neutral Amino Acids in Aqueous Electrolytic Solutions: Measurements and Modeling:	https://www.doi.org/10.1021/acs.jced.5b00393
Electrical Conductances of Tetrabutylammonium Bromide, Sodium Tetraphenylborate, and Sodium Bromide in N,N-Dimethylformamide (1) + Water (2) Mixtures at (308.15, 313.15, 318.15, and 323.15) K:	https://www.doi.org/10.1021/je1008813
Study of the NaBr-DyBr3 phase diagram by differential thermal analysis:	https://www.doi.org/10.1016/j.tca.2004.12.012

Legend

ea:	Electron affinity
ie:	Ionization energy
pvap:	Vapor pressure
tt:	Triple Point Temperature