potassium bromide

Inchi:	InChI=1S/BrH.K/h1H;/q;+1/p-1
InchiKey:	IOLCXVTUBQKXJR-UHFFFAOYSA-M
Formula:	BrK
SMILES:	[Br-].[K+]
Mol. weight [g/mol]:	119.00
CAS:	7758-02-3

Physical Properties

Property code	Value	Unit	Source
ea	0.64 ± 0.01	eV	NIST Webbook
ea	0.61	eV	NIST Webbook
ie	7.90 ± 0.10	eV	NIST Webbook
ie	7.85	eV	NIST Webbook
ie	7.90 ± 0.10	eV	NIST Webbook
ie	7.90 ± 0.10	eV	NIST Webbook
ie	8.82 ± 0.04	eV	NIST Webbook
ie	8.10	eV	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
econd	190.00	S/m	1131.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	191.00	S/m	1136.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides

econd	194.00	S/m	1151.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	196.00	S/m	1169.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	200.00	S/m	1190.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	201.00	S/m	1198.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	202.00	S/m	1210.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	203.00	S/m	1221.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	204.00	S/m	1229.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	204.00	S/m	1233.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	205.00	S/m	1237.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides

econd	205.00	S/m	1245.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.54973e+01
Coeff. B	-1.67888e+04
Coeff. C	-1.09920e+02
Temperature range (K), min.	1068.15
Temperature range (K), max.	1653.15

Sources

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
Measurements and calculations of solid-liquid equilibria in the quaternary system KBr-CaBr2-MgBr2-H2O at (298 and 323) K:	https://www.doi.org/10.1016/j.fluid.2017.07.019
Oxoacidity scale of molten ionic chlorides and bromides:	https://www.doi.org/10.1016/j.fluid.2015.05.025
Temperature Dependence of the Density of Aqueous Alkali Halide Salt Solutions by Experiment and Molecular Simulation:	https://www.doi.org/10.1021/je500420g
Solid-Liquid Equilibria in the Quaternary Systems NaBr-SrBr2-MgBr2-H2O and KBr-SrBr2-MgBr2-H2O at 323 K:	https://www.doi.org/10.1021/acs.jced.6b00799
Nonelectrolyte Study of Some Metal Halides in Glycerol + Water Mixtures:	https://www.doi.org/10.1007/s10765-006-0096-4
Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides:	https://www.doi.org/10.1016/j.jct.2012.02.015
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
Study of bromide salts solubility in the (m1KBr + m2CaBr2)(aq) system at T = 298.15 K:	https://www.doi.org/10.1016/j.jct.2012.06.006
Calorimetric Investigation of PrBr3-MBr Liquid Mixtures (M = Na, K, Rb, Cs):	https://www.doi.org/10.1021/je200419x
Effect of NaBr, KCl, KBr, and MgCl2 on Viscosities of Aqueous Glycine and Sarcosine Solutions at 298.15 K:	https://www.doi.org/10.1021/je050048y
Solubility Isotherms at 298.15 K in the ternary (Na + K + Mg + Ca + Br + H2O) systems to high concentration and temperature:	https://www.doi.org/10.1021/je100905g
Densities, apparent and partial molar volumes of aqueous KBr solutions at high temperatures and high pressures:	https://www.doi.org/10.1016/j.fluid.2006.05.015
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
Buffers and Ionic Salts: Densities and Solubilities of Aqueous and Electrolyte Solutions:	https://www.doi.org/10.1021/je900260g
Ionization properties of MES, MOPS, MOPSO, and MOBS in water and in 2-propanol/water mixtures at 298.15 K	https://www.doi.org/10.1016/j.tca.2010.04.004
Solubility of KBr in Binary Solvents Formed by Acetone and Water in the Temperature Range between (288.15 and 313.15) K:	https://www.doi.org/10.1021/je8003639
Interaction of biological buffers with electrolytes: Densities of aqueous solutions of two substituted aminosulfonic acids and ionic salts from T = (298.15 to 328.15) K:	https://www.doi.org/10.1016/j.jct.2008.12.011
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

Electrical Conductivity of Electrolytes Found In Natural Waters from (5 to 90) deg C:	https://www.doi.org/10.1021/je101012n
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 Vapor Pressures over Saturated Aqueous Solutions at Invariant Points of the NaCl + KCl + H2O, NaCl + NaNO3 + H2O, KCl + KBr + H2O, KCl + KI + H2O, and KCl + KNO3 + H2O Systems:	https://www.doi.org/10.1021/je800963g
Effect of Temperature and Concentration of KBr or KNO3 on the Measurement and Modeling Densities of Electrolyte Common Acid Solutions with Dissolved Methanoic Alkali Halide Salt Solutions by Experiment and Molecular Simulation:	https://www.doi.org/10.1021/je1012789
Study on solid liquid phase equilibria in ionic liquid 2. The solubility of alkali bromide in ionic liquid 1-ethyl-3-methylimidazolium ethyl sulfate at T = 298.15 K:	https://www.doi.org/10.1016/j.jct.2013.08.018
Densities of aqueous solutions containing model compounds of amino acid residues in physiological fluids at T = 298.15 K:	https://www.doi.org/10.1021/je5009944
Phase Equilibria in the Quaternary System NaBr + KBr + SrBr2 + H2O and the Subsystems NaBr + SrBr2 + H2O and KBr + SrBr2 + H2O at T = 323 K:	https://www.doi.org/10.1016/j.fluid.2007.03.008
Vapor Pressures of Aqueous Solutions with Mixed Salts of NaCl + KCl + H2O:	https://www.doi.org/10.1016/j.jct.2006.11.014
Determination of Activity Coefficients, Osmotic Coefficients, and Excess Gibbs Free Energies of KCl and KBr Aqueous Mixtures at 298.15 K:	https://www.doi.org/10.1021/acs.jced.7b00273
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/je020144o
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.7b00460
Phase equilibria in the ternary systems KBr MgBr2 H2O and NaCl MgBr2 H2O at 298.15 K:	https://www.doi.org/10.1021/je049814b
Isopiestic determination of the osmotic and activity coefficients of the {yKBr + (1 - y)K2HPO4}(aq) system at T = 298.15 K:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7758023&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.doi.org/10.1021/acs.jced.7b00503
Solid-Liquid Phase Equilibria of Ternary System KBr-LiBr-H2O at 273 and 308 K:	https://www.doi.org/10.1016/j.fluid.2015.02.015
Ultrasound velocity in dissolving alkali halide melts:	https://www.doi.org/10.1016/j.jct.2013.03.003
	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
	https://www.doi.org/10.1021/acs.jced.9b00517
	https://www.doi.org/10.1016/j.jct.2010.10.021

Legend

ea:	Electron affinity
econd:	Electrical conductivity
ie:	Ionization energy
pvap:	Vapor pressure

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