lithium bromide

Inchi: InChI=1S/BrH.Li/h1H;/q;+1/p-1
InchiKey: AMXOYNBUYSYVKV-UHFFFAOYSA-M
Formula: BrLi
SMILES: [Li]Br
Mol. weight [g/mol]: 86.84
CAS: 7550-35-8

Physical Properties

Property code	Value	Unit	Source
affp	819.00	kJ/mol	NIST Webbook
basg	792.50	kJ/mol	NIST Webbook
ea	0.66 ± 0.04	eV	NIST Webbook
ie	9.43 ± 0.05	eV	NIST Webbook
ie	10.00	eV	NIST Webbook
ie	9.30	eV	NIST Webbook
ie	8.70	eV	NIST Webbook
ie	9.40	eV	NIST Webbook
tf	824.00	K	An anion effect on the separation of AgI-containing melts using sound waves

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.54385e+01
Coeff. B	-1.59969e+04
Coeff. C	-1.04720e+02
Temperature range (K), min.	1021.15
Temperature range (K), max.	1583.15

Sources

Vapor Pressure Measurement for the Ternary System of Water, Lithium Bromide, and 1-Ethyl-3-methylimidazolium Acetate:	https://www.doi.org/10.1021/acs.jced.7b00951
Isopiestic measurements of thermodynamic properties for the aqueous system LiBr-CaBr2-H2O at 373.15 K:	https://www.doi.org/10.1016/j.jct.2018.09.018
Density and speed of sound of lithium bromide with organic solvents: Measurement and correlation:	https://www.doi.org/10.1016/j.jct.2007.04.006
Vapour pressures, densities, and viscosities of the (water + lithium bromide + potassium acetate) system and (water + lithium bromide + sodium lactate) system:	https://www.doi.org/10.1016/j.jct.2005.04.007
Apparent molar volumes and compressibilities of electrolytes and ionic liquids in gamma-butyrolactone:	https://www.doi.org/10.1016/j.jct.2012.05.026
Study of Apparent Molar Volumes for Ionic Liquid, 1-Ethyl-3-methyl imidazolium Chloride in Aqueous Lithium Nitrate, Lithium Bromide, and Lithium Chloride Solutions at Temperatures (298.15 to 318.15) K:	https://www.doi.org/10.1021/acs.jced.5b00329
Vapour pressures and densities of the mixed-solvent desiccants (glycols + water + salts):	https://www.doi.org/10.1016/j.jct.2008.12.003
The (p, ρ, T) Properties and Apparent Molar Volumes V of LiBr + C2H5OH:	https://www.doi.org/10.1021/je1003065
Density of Methanolic Alkali Halide Salt Solutions by Experiment and Molecular Simulation:	https://www.doi.org/10.1021/je5009944
Thermodynamic properties of (LiCl + N,N-dimethylacetamide) and (LiBr + N,N-dimethylacetamide) at temperatures from (323.15 to 423.15) K:	https://www.doi.org/10.1016/j.jct.2004.09.015
Vapor pressures of lithium bromide or lithium chloride and ethanol solutions:	https://www.doi.org/10.1016/j.fluid.2006.02.012
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7550358&Units=SI
Solid Liquid Phase Equilibria of Ternary Systems LiCl LiBr H2O and CaCl2 CaBr2 H2O at 288.15 K:	https://www.doi.org/10.1021/acs.jced.6b00855
Ion-Solvent Interactions of Some Halides of Common Cations with Organic Solvent Mixtures by Conductometric, Volumetric, Viscometric, and Refractometric Techniques:	https://www.doi.org/10.1021/je900656c
Vapor Pressure Measurement of Ternary Systems LiCl + [Emim]Cl + H2O, LiBr + [Emim]Br + H2O, and LiCl + [Emim]Br + H2O:	https://www.doi.org/10.1021/acs.jced.8b01217
Thermophysical Properties of Ternary Systems Potassium Formate + Propylene Glycol/Glycerol + Water:	https://www.doi.org/10.1021/acs.jced.8b00742
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
An anion effect on the separation of AgI-containing melts using sound waves:	https://www.doi.org/10.1016/j.jct.2015.03.022
Vapor pressures, osmotic and activity coefficients for (LiBr + acetonitrile) between the temperatures (298.15 and 343.15) K:	https://www.doi.org/10.1016/j.jct.2004.03.007
Vapour pressures, densities, and viscosities of the aqueous solutions containing (triethylene glycol or propylene glycol) and (LiCl or LiBr):	https://www.doi.org/10.1016/j.jct.2008.12.022
The experimental study on influence of zwitterionic compounds on solubility of lithium bromide in water:	https://www.doi.org/10.1016/j.fluid.2018.07.021
Standard partial molar volumes of some electrolytes in ethylene carbonate based mixtures:	https://www.doi.org/10.1016/j.jct.2003.09.005
Heat Capacities of Four Promising Alternatives to Lithium Bromide Aqueous Solution in Absorption Refrigerators:	https://www.doi.org/10.1021/je400605x
Experimental measurement and modeling of solubility of LiBr and LiNO3 in methanol, ethanol, 1-propanol, 2-propanol and 1-butanol:	https://www.doi.org/10.1016/j.fluid.2011.03.017
Solubilities of six lithium salts in five non-aqueous solvents and in a few of their binary mixtures:	https://www.doi.org/10.1016/j.fluid.2017.12.034
Study of thermodynamic properties of binary solutions of lithium bromide or lithium chloride with methanol:	https://www.doi.org/10.1016/j.fluid.2005.07.002
Vapor Pressure Measurement of the Ternary Systems H2O + LiBr + [Dmim]Cl, H2O + LiBr + [Dmim]BF4, H2O + LiCl + [Dmim]Cl, and H2O + LiCl + [Dmim]BF4:	https://www.doi.org/10.1021/je1009202
The experimental study on the influence of crown ethers and glycols on the solubility of lithium bromide in water:	https://www.doi.org/10.1016/j.fluid.2018.11.036
Solubilities of Five Lithium Salts in 1-Butyl-3-methylimidazolium Dicyanamide and in 1-Butyl-3-methylimidazolium Tetrafluoroborate from 298.15 to 343.15 K:	https://www.doi.org/10.1021/acs.jced.8b00618
Temperature Dependence of the Density of Aqueous Alkali Halide Salt Solutions by Experiment and Molecular Simulation:	https://www.doi.org/10.1021/je500420g
Experimental Investigation of Isothermal Vapor-Liquid Equilibrium and Estimation of Excess Thermodynamic Properties (hE) of CHO2K-H2O from 278.15 to 423.15 K:	https://www.doi.org/10.1021/acs.jced.8b01078
Physics and Chemistry of Lithium Halides in 1,3-Dioxolane and Its Binary Mixtures with Acetonitrile Probed by Conductometric, Volumetric, Viscometric, Refractometric and Acoustic Study:	https://www.doi.org/10.1016/j.tca.2012.08.009
Density of ethanolic alkali halide salt solutions by experiment and molecular simulation:	https://www.doi.org/10.1016/j.fluid.2015.08.005
Vapor pressures, desities, and viscosities of the (Water + Lithium Bromide + Sodium Formate) system and (Water + Lithium Bromide + Potassium Formate) system:	https://www.doi.org/10.1021/je010312x
Vapor-liquid equilibria and volumetric properties for new working fluid (LiNO3 + LiBr + H2O) and corresponding binary systems at different temperatures and ambient pressure:	https://www.doi.org/10.1016/j.fluid.2016.08.036
Molar heat capacities of aqueous 2-amino-2-ethyl-1,3-propanediol solutions and their ternary mixtures containing piperazine or lithium salts:	https://www.doi.org/10.1016/j.fluid.2013.12.017
Solid-Liquid Phase Equilibria of Ternary System KBr-LiBr-H2O at 273 and 308 K:	https://www.doi.org/10.1021/acs.jced.9b00517
Measuring and modeling aqueous electrolyte/amino-acid solutions with ePC-SAFT:	https://www.doi.org/10.1016/j.jct.2013.08.018
Heat capacities of the mixed-solvents desiccants (glycols +water + salts):	https://www.doi.org/10.1016/j.tca.2009.01.008

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Electrical Conductivity of Lithium Chloride, Lithium Bromide, and Lithium Iodide Electrolytes in Methanol, Water, and Their Binary Mixtures: https://www.doi.org/10.1021/acs.jced.9b00405
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

Legend

affp:	Proton affinity
basg:	Gas basicity
ea:	Electron affinity
ie:	Ionization energy
pvap:	Vapor pressure
tf:	Normal melting (fusion) point