

potassium iodide

Inchi: InChI=1S/HI.K/h1H;/q;+1/p-1
InchiKey: NLKNQRATVPKPDG-UHFFFAOYSA-M
Formula: IK
SMILES: [I-].[K+]
Mol. weight [g/mol]: 166.00
CAS: 7681-11-0

Physical Properties

Property code	Value	Unit	Source
ea	0.50 ± 0.10	eV	NIST Webbook
ea	0.73 ± 0.01	eV	NIST Webbook
ie	7.20 ± 0.10	eV	NIST Webbook
ie	7.20 ± 0.10	eV	NIST Webbook
ie	8.20 ± 0.30	eV	NIST Webbook
ie	7.40	eV	NIST Webbook
ie	7.50 ± 0.40	eV	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
econd	158.00	S/m	1109.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	160.00	S/m	1126.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides

econd	161.00	S/m	1143.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	163.00	S/m	1152.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	164.00	S/m	1160.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	165.00	S/m	1170.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	165.00	S/m	1176.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	166.00	S/m	1186.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	166.00	S/m	1203.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	167.00	S/m	1225.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	167.00	S/m	1236.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides

econd	168.00	S/m	1246.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	167.00	S/m	1252.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides
econd	167.00	S/m	1269.00	Liquid + liquid equilibrium in mixtures of lithium fluoride with potassium and rubidium halides

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.31255e+01
Coeff. B	-1.16356e+04
Coeff. C	-2.50250e+02
Temperature range (K), min.	1018.15
Temperature range (K), max.	1618.00

Sources

The Yaws Handbook of Vapor Pressure: Solvation of Basic and Neutral Amino Acids in Aqueous Electrolytic Solutions of Methanolic Alkali Halide Salt Solutions by Experiment and Molecular Simulation

Thermodynamic study of some alkali metal halides in (dimethyl sulfoxide + acetone) and density of potassium iodide in a Binary Propan-1-ol-Water Solvent Mixture at 298.15 K

Phase Diagrams of Ethanol-Water Solvent Mixtures at 298.15, 308.15, and 318.15 K

Pressures over Saturated Aqueous Solutions of Lithium Fluoride, Potassium Fluoride, and Rubidium Fluoride with Alkali Halide Salts: KCl + KNO₃ + H₂O, and KCl + K₂SO₄ + H₂O Systems

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

<https://www.doi.org/10.1021/acs.jced.5b00393>

<https://www.doi.org/10.1021/je5009944>

<https://www.doi.org/10.1016/j.jct.2009.03.005>

<https://www.doi.org/10.1021/je9006426>

<https://www.doi.org/10.1021/je800682p>

<https://www.doi.org/10.1021/je800963g>

<https://www.doi.org/10.1016/j.jct.2012.02.015>

<https://www.doi.org/10.1016/j.fluid.2015.08.005>

Conductometric Study of Some Metal Halides in Glycerol + Water Mixtures: Ultrasound velocity in dissolving alkali halide melts: Apparent molar volumes and apparent molar heat capacities of aqueous KI, NaCl , and KNO_3 at temperatures between 15 and 300 °C in dimethyl sulfoxide: Potassium iodide solutions investigated by surface properties for pressure up to 6 MPa: Electrolyte Solutions: Measurement and Prediction of Surface Tension for Aqueous Concentrated Electrolyte Measuring and modeling aqueous electrolyte/amino-acid solutions with temperature dependence of the Density of Aqueous Alkali Halide Salt Dynamics Viscosities of KCl, NH_4Cl , MgCl_2 , and NH_4I in Ethanol at Several Temperatures up to 68.5 MPa: $\text{CaCl}_2(\text{aq})$, $\text{KI}(\text{aq})$, $\text{NaCl}(\text{aq})$, $\text{KCl}(\text{aq})$, $\text{AlCl}_3(\text{aq})$, and $(0.964 \text{ NaCl} + 0.136 \text{ KCl})(\text{aq})$ at Temperatures Between (283 and 472) K, Pressures up to 68.5 MPa, and Molalities up to $6 \text{ mol} \cdot \text{kg}^{-1}$:

<https://www.doi.org/10.1007/s10765-006-0096-4>
<https://www.doi.org/10.1016/j.jct.2010.10.021>
<https://www.doi.org/10.1016/j.jct.2007.05.008>
<https://www.doi.org/10.1021/je4010678>
<https://www.doi.org/10.1021/acs.jced.7b00503>
<http://webbook.nist.gov/cgi/cbook.cgi?ID=C7681110&Units=SI>
<https://www.doi.org/10.1016/j.jct.2013.08.018>
<https://www.doi.org/10.1021/je500420g>
<https://www.doi.org/10.1021/je049808f>
<https://www.doi.org/10.1021/je2013704>

Legend

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

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