rubidium chloride

Other names:	rubidium chloride (RbCl)
	rubidium monochloride
Inchi:	InChI=1S/ClH.Rb/h1H;/q;+1/p-1
InchiKey:	FGDZQCVHDSGLHJ-UHFFFAOYSA-M
Formula:	ClRb
SMILES:	[Cl-].[Rb+]
Mol. weight [g/mol]:	120.92
CAS:	7791-11-9

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
rhos	2578.40	kg/m3	903.00	Density of Crystalline Alkali Chlorides and Their Eutectic Mixtures Near the Melting Point
rhos	2573.50	kg/m3	913.00	Density of Crystalline Alkali Chlorides and Their Eutectic Mixtures Near the Melting Point
rhos	2567.80	kg/m3	923.00	Density of Crystalline Alkali Chlorides and Their Eutectic Mixtures Near the Melting Point
rhos	2562.20	kg/m3	933.00	Density of Crystalline Alkali Chlorides and Their Eutectic Mixtures Near the Melting Point
rhos	2556.10	kg/m3	943.00	Density of Crystalline Alkali Chlorides and Their Eutectic Mixtures Near the Melting Point
rhos	2551.70	kg/m3	953.00	Density of Crystalline Alkali Chlorides and Their Eutectic Mixtures Near the Melting Point

rhos	2548.60	kg/m3	963.00	Density of Crystalline Alkali Chlorides and Their Eutectic Mixtures Near the Melting Point
rhos	2547.60	kg/m3	973.00	Density of Crystalline Alkali Chlorides and Their Eutectic Mixtures Near the Melting Point
rhos	2550.30	kg/m3	983.00	Density of Crystalline Alkali Chlorides and Their Eutectic Mixtures Near the Melting Point
rhos	2556.40	kg/m3	993.00	Density of Crystalline Alkali Chlorides and Their Eutectic Mixtures Near the Melting Point

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.42352e+01
Coeff. B	-1.40827e+04
Coeff. C	-1.98770e+02
Temperature range (K), min.	1065.15
Temperature range (K), max.	1663.15

Sources

Phase diagram of the NaCl+RbCl+H2O system:	https://www.doi.org/10.1021/acs.jced.6b00879
Solubility of RbCl and CsCl in pure water at subzero temperatures, heat capacity of RbCl(aq) and CsCl(aq) at T = 298.15 K, and thermodynamic modeling of RbCl+H2O and CsCl+H2O systems:	https://www.doi.org/10.1016/j.jct.2016.09.031
Phase equilibrium and activity coefficients in ternary systems at 298.15 K and thermodynamic modeling of RbCl/CsCl + [Cnmim]Cl (n = 2, 4, 6, 8) + H2O Ternary Systems at T = (288.15, 298.15, and 308.15) K:	https://www.doi.org/10.1016/j.jct.2016.03.027
Measurements and Correlations of the Solid−Liquid Equilibrium of RbCl/CsCl + Water:	https://www.doi.org/10.1021/je4007986
Density of Methanolic Alkali Halide Salt Solutions by Experiment and Molecular Simulation:	https://www.doi.org/10.1021/je5009944
Density of Crystalline Alkali Chlorides and Their Eutectic Mixtures Near the Melting Point:	https://www.doi.org/10.1021/je901030f
Compositions, Densities, and Refractive Indices for the Ternary Systems Ethylene Glycol + NaCl + H2O, Ethylene Glycol + KCl + H2O, Ethylene Glycol + RbCl + H2O, and Ethylene Glycol + CsCl + H2O at 298.15 K:	https://www.doi.org/10.1021/je900630n

The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Solid Liquid Equilibrium (SLE) of the N,N-Dimethylacetamide (DMA) + MCl (M = Na, K, Rb, and Cs) + Water Ternary Systems at Multiple Temperatures:	https://www.doi.org/10.1021/je400959n
Stable Phase Equilibrium in the Aqueous Quaternary System Rb+, Mg2+//Cl-, borate-H2O at 323 K:	https://www.doi.org/10.1021/acs.jced.6b00024
Solubilities, densities and refractive indices for the ternary systems ethylene glycol + MCl + H2O (M = Na, K, Rb, Cs) at (15 and 35) °C:	https://www.doi.org/10.1016/j.jct.2010.01.017
Stable (solid + liquid) phase equilibrium for the ternary system (NaCl + RbCl + H2O) at T = (288.15, 298.15 and 308.15) K:	https://www.doi.org/10.1016/j.jct.2016.12.007
Thermochemistry of NaRb[B4O5(OH)4]*4H2O:	https://www.doi.org/10.1016/j.tca.2006.05.001
Thermodynamics of complexation of aqueous 18-crown-6 with rubidium and cesium ions: Apparent molar volumes and apparent molar heat capacities of aqueous {18-crown-6 + rubidium [illegible] mol kg-1, and at the pressure 0.35 MPa:	https://www.doi.org/10.1016/j.jct.2005.05.005
Measurement and Correlation of Solubilities and Solution [illegible]	https://www.doi.org/10.1021/acs.jced.5b01043
Solubilities, Densities, and Refractive Indices for the Ternary Systems [illegible] (M = Na, K, [illegible]	https://www.doi.org/10.1021/je200443t
Solid–liquid equilibrium in the aqueous system containing the chlorides of lithium, rubidium and magnesium at 323 K:	https://www.doi.org/10.1016/j.fluid.2014.01.037
Apparent molar volumes and heat capacities of aqueous lithium chloride, rubidium chloride, and cesium chloride at temperatures from (278.15 to 393.15) K at the pressure 0.35 MPa:	https://www.doi.org/10.1016/j.jct.2004.01.004
Enthalpies of formation and lattice enthalpies of alkaline metal acetates:	https://www.doi.org/10.1016/j.tca.2004.11.004
Thermodynamics and phase equilibrium of the high concentration solid solution-aqueous solution system KCl-RbCl-H2O from T = 298.15 K to T = 323.15 K:	https://www.doi.org/10.1016/j.jct.2016.12.003
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7791119&Units=SI
Temperature Dependence of the Density of Aqueous Alkali Halide Salt Solutions by Experiment and Molecular Simulation:	https://www.doi.org/10.1021/je500420g
Thermodynamic studies of (RbF + RbCl + H2O) and (CsF + CsCl + H2O) ternary systems from potentiometric measurements at T = 298.2 K:	https://www.doi.org/10.1016/j.jct.2016.08.014

Legend

pvap:	Vapor pressure
rhos:	Solid Density