Potassium nitrate

Other names: nitric acid potassium salt
Inchi: InChI=1S/K.NO3/c;2-1(3)4/q+1;-1
InchiKey: FGIUAXJPYTZDNR-UHFFFAOYSA-N
Formula: KNO3
SMILES: O=[N+]([O-])O[K]
Mol. weight [g/mol]: 101.10

Physical Properties

Property code	Value	Unit	Source
tf	606.95	K	Crystallization of ionic salts for calibration of differential scanning calorimeters

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
econd	78.20	S/m	665.00	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	77.70	S/m	663.50	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	76.60	S/m	659.60	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	76.30	S/m	658.50	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	74.90	S/m	653.50	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	73.70	S/m	649.60	Electrical Conductivity of LiCl-KCl-CsCl Melts

econd	73.40	S/m	648.50	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	70.60	S/m	638.50	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	70.10	S/m	636.70	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	69.20	S/m	633.80	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	69.10	S/m	633.60	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	69.10	S/m	633.50	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	68.50	S/m	631.50	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	68.30	S/m	630.50	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	67.70	S/m	628.50	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	67.70	S/m	628.40	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	67.50	S/m	627.90	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	67.10	S/m	626.50	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	66.50	S/m	624.60	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	66.20	S/m	623.50	Electrical Conductivity of LiCl-KCl-CsCl Melts
econd	64.70	S/m	618.50	Electrical Conductivity of LiCl-KCl-CsCl Melts

Sources

Aqueous Solubilities of Estrone, 17p-Estradiol, 17a.-Ethynylestradiol, and Bisphenol A:	https://www.doi.org/10.1021/je050318c
Transfer Partial Molar Volumes of L-Alanine/L-Glutamine/Glycylglycine from Water to 0.512 mol/kg Aqueous KNO3/K2SO4 Solutions at (298.15 to 323.15) K:	https://www.doi.org/10.1021/je300083m
Intermolecular/interionic interactions in L-leucine-, L-asparagine-, and glycylglycine-aqueous electrolyte systems:	https://www.doi.org/10.1016/j.tca.2006.04.004
Effect of KCl and KNO3 on Partial Molal Volumes and Partial Molal Compressibilities of Some Amino Acids at Different Temperatures:	https://www.doi.org/10.1007/s10765-008-0514-x
Solubility of Diflufenican in Pure and Binary Solvent Systems:	https://www.doi.org/10.1021/acs.jced.8b00632
Intermolecular/interionic interactions in L-isoleucine-, L-proline-, and L-glutamine-aqueous electrolyte systems:	https://www.doi.org/10.1016/j.jct.2006.03.009
Enthalpies of Transfer of Amino Acids from Water to Aqueous Solutions of Alkali Metal Nitrates:	https://www.doi.org/10.1021/je050296u
Investigation of the aqueous salt solutions of some first and second group metals at various pressures:	https://www.doi.org/10.1016/j.fluid.2008.02.014
Solubility, Density, Viscosity, Refractive Index, and Electrical Conductivity for Potassium Nitrate-Water-2-Propanol at (298.15 and 313.15) K:	https://www.doi.org/10.1021/je800637t
Transfer Partial Molar Isentropic Compressibilities of (L-Alanine/L-Glutamine/Glycylglycine) from Water to 0.512 mol*kg-1 Aqueous KNO3/0.512 mol*kg-1 Aqueous K2SO4 Solutions Between 298.15 K and 323.15 K:	https://www.doi.org/10.1007/s10765-013-1432-0
The influence of cation, anion and temperature on the liquid-liquid [illegible] alkanols-water systems:	https://www.doi.org/10.1016/j.fluid.2011.03.018
Measuring and modeling aqueous electrolyte/amino-acid solutions with ePC-SAFT:	https://www.doi.org/10.1016/j.jct.2013.08.018
Thermodynamic properties of pentalead tris(vanadate) chloride:	https://www.doi.org/10.1016/j.tca.2010.12.026
Solubility of some phenolic compounds in aqueous alkali metal nitrate solutions from (293.15 to 318.15) K:	https://www.doi.org/10.1016/j.jct.2008.06.006
Crystallization of ionic salts for calibration of differential scanning calorimeters:	https://www.doi.org/10.1016/j.tca.2016.08.003
Densities and Speeds of Sound in L-Leucine/L-Isoleucine + Aqueous K2SO4/KNO3 Systems at (298.15 to 323.15) K:	https://www.doi.org/10.1021/je200146j
Viscosity studies of (L-alanine, L-proline, L-valine, L-leucine + aqueous KCl/KNO3) solutions at different temperatures:	https://www.doi.org/10.1016/j.jct.2008.07.019
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, KCl + KNO3 + H2O, and KCl + K2SO4 + H2O Systems:	https://www.doi.org/10.1021/je800963g
Influence of selected potassium salts on thermal stability of ammonium nitrate:	https://www.doi.org/10.1016/j.tca.2019.178313
Effect of Temperature and Concentration of KBr or KNO3 on the Volumetric and Transport Properties of Aqueous Solutions of Tripotassium Citrate:	https://www.doi.org/10.1021/je1012789
Equilibrium Study in the KNO3 + NH4NO3 + H2O System at Temperatures from 293.15 to 323.15 K:	https://www.doi.org/10.1021/acs.jced.8b01052
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=B6000529&Units=SI
Physico-chemical properties of some electrolytes in water and aqueous sodiumdodecyl sulfate solutions at different temperatures:	https://www.doi.org/10.1016/j.jct.2011.06.024
Ultrasonic Velocities and Densities of L-Histidine or L-Glutamic Acid or L-Tryptophan or Glycylglycine + 2 mol*L-1 Aqueous KCl or KNO3 Solutions from (298.15 to 323.15) K:	https://www.doi.org/10.1021/je900199j
Electrical Conductivity of Electrolytes Found in Natural Waters from (5 to 90) °C:	https://www.doi.org/10.1021/je101012n
Densities, Viscosities, and Adiabatic Compressibilities of Some Mineral Salts in Water at Different Temperatures:	https://www.doi.org/10.1021/je030205y
Temperature Dependence of Vapor Pressures over Saturated Aqueous Solutions at Invariant Points of the NaCl + KNO3 + H2O, NaCl + Na2CO3 + H2O, and NaCl + Na2SO4 + H2O Systems:	https://www.doi.org/10.1021/je1009653
Solid-Liquid Equilibria Studies in the KVO3-KNO3-H2O System in the Temperature Range 298.15-323.15 K:	https://www.doi.org/10.1021/acs.jced.7b00507
Viscosities of L-Histidine/L-Glutamic Acid/L-Tryptophan/Glycylglycine+2 M Aqueous KCl/KNO3 Solutions at T=(298.15 to 323.15)K:	https://www.doi.org/10.1007/s10765-011-0996-9
Electrical Conductivity of LiCl-KCl-CsCl Melts:	https://www.doi.org/10.1021/acs.jced.5b00682
Electrolytic Effect on the Solubility and Solvation Thermodynamics of l-Serine and l-Isoleucine in Aqueous Media:	https://www.doi.org/10.1021/acs.jced.9b00363
Distillation Separation of Hydrofluoric Acid and Nitric Acid From Acid Waste Using the Salt Effect on Vapor-Liquid Equilibrium	https://www.doi.org/10.1007/s10765-010-0904-8
Knudsen thermogravimetry approach to the thermodynamics ofaqueous solutions:	https://www.doi.org/10.1016/j.jct.2013.02.015
Interactions in l-alanine /l-proline /l-valine /l-leucine aqueous KCl/KNO3 systems at different temperatures: An isentropic compressibility study:	https://www.doi.org/10.1016/j.tca.2008.10.023

Legend

econd:	Electrical conductivity
tf:	Normal melting (fusion) point