

Choline chloride

Other names:	(.beta.-hydroxyethyl)trimethylammonium chloride (2-hydroxyethyl)trimethylammonium chloride 2-hydroxy-N,N,N-trimethylethanaminium chloride cholinium chloride trimethyl(2-hydroxyethyl)ammonium chloride
Inchi:	InChI=1S/C5H14NO.ClH/c1-6(2,3)4-5-7;/h7H,4-5H2,1-3H3;1H/q+1;/p-1
InchiKey:	SGMZJAMFUVOLNK-UHFFFAOYSA-M
Formula:	C5H14ClNO
SMILES:	C[N+](C)(C)CCO.[Cl-]
Mol. weight [g/mol]:	139.62
CAS:	67-48-1

Physical Properties

Property code	Value	Unit	Source
tf	577.20	K	Formation of Deep Eutectic Solvents by Phenols and Choline Chloride and Their Physical Properties
tt	351.62	K	Thermal Properties of Choline Chloride/Urea System Studied under Moisture-Free Atmosphere

Sources

Prediction of refractive index and density of deep eutectic solvents using some correlations
Solubility of carbon dioxide in a eutectic mixture of choline chloride and glycerol
Viscometric study of mucopolysaccharides in aqueous deep eutectic solvent
Efficient and Reversible Nitric Oxide Sorption
Absorption by Low-Viscosity, Renewable and Viscosity-rich Solvents: Chloride + Urea) Deep Eutectic Solvent
Thermodynamic Properties and Solubility of Different Sugars in Deep Eutectic Solvents
Different Natural Deep Eutectic Separation of azeotropic mixtures (ethanol and water) enhanced by deep eutectic solvents
Prediction of a deep eutectic solvent based on choline chloride and glycerol and its aqueous mixtures as universal solvents
Solubility and effect of water on their intermolecular interactions:

<https://www.doi.org/10.1016/j.fluid.2013.06.050>

<https://www.doi.org/10.1016/j.jct.2012.08.025>

<https://www.doi.org/10.1016/j.fluid.2018.06.018>

<https://www.doi.org/10.1021/acs.jced.9b00173>

<https://www.doi.org/10.1021/je5001796>

<https://www.doi.org/10.1021/acs.jced.7b00184>

<https://www.doi.org/10.1021/acs.jced.6b00552>

<https://www.doi.org/10.1016/j.fluid.2017.03.010>

<https://www.doi.org/10.1016/j.fluid.2012.08.016>

<https://www.doi.org/10.1016/j.fluid.2017.01.022>

Henry's constant of carbon dioxide-aqueous deep eutectic solvent (formation of ethylene glycol alcohol) and the deep eutectic solvent formed from several combinations of properties of choline chloride from some liquid volumetric properties of (choline chloride+urea) deep eutectic solvent and transition temperature in the mixture (L.T.M.) of diglycine 5 K; Molecular weight and characterization of Deep Eutectic Solvents: Thermodynamics of phase transfer for polar molecules from alkanes to deep eutectic solvents; Viscosities of (choline chloride + glycerol) deep eutectic solvent and electrical conductivities of pure and various binary mixtures of them with water at different pressures; Rahimi (2009/1612) Deep Eutectic Binary Mixtures With Glycerol Capture by Glycol and Amine Based Deep Eutectic Solvents: properties of CO₂ in choline-chloride based organic chloroformate of deep eutectic solvents at high densities; Viscosities [from (278.15 to 318.15) K], and Electrical Conductivities Phase Equilibrium for Aqueous Separation of Chloroform from n-alkanes and Chloroform from Ethylene Glycol; Properties of Deep Eutectic Solvent Selected from an Ionic Liquid Model and dynamic viscosity of choline chloride-based deep eutectic solvent and temperature range (from 10 to 358.15) K; Ionization stability and properties of ether-like based deep eutectic solvents (choline, glycerol, malonic and relene) Argonium-Based Deep Eutectic Solvents! Properties of Choline Chloride/Urea System Studied under Moisture Investigation of choline chloride based ionic liquids analogues: Solubility Increment and Thermodynamic Analysis of Bioactive Compounds in Ionic Liquids for the Quantitative Determination of Ethanol-Cyclohexane-Chloroform Ternary and quaternary Systems with urea and ammonium salts as thermally and chemically stable coefficients of water in cholinium-based ionic liquids: Experimental measurements and modeling of density and refractive index for choline chloride-urea-deep eutectic solvent and its aqueous mixtures at T = 298.15 and 323.15 K and up to 50 MPa: Cyclohexane-Hexadecane Deep Eutectic Solvent: A Streamlined Method for the Speed Determination in Analyses of Carbon Dioxide in Guaiacol-Based Deep Eutectic Solvent: Measurement of the vapor pressure and mixing in Choline Chloride/Urea Deep Eutectic Solvent + Water System and thermodynamic properties of Acetaminophen in solutions of four chloride-based ionic liquids analogues: Molar heat capacities of choline chloride-based deep eutectic solvents Electrical conductivity of ammonium- and phosphonium based deep eutectic solvents means Carbon Dioxide Solubilities of Supercritical CO₂ and Methanol in Butylmethylceluene + tertiary ammonium salts for the separation of methanol from oil with solvents and their Physical Properties: Experimental determination and correlation of acetaminophen solubility Vapor-Liquid Equilibria for n-Propanol Refraction through Extractive Solvents and Ionic Transported Solvent of electrolyte gel and Choline Chloride: the 2-hydroxy-N,N,N-trimethylethanaminium chlorides based ionic liquids at several temperatures;

<https://www.doi.org/10.1016/j.jct.2013.08.029>
<https://www.doi.org/10.1016/j.fluid.2018.05.008>
<https://www.doi.org/10.1016/j.fluid.2017.03.015>
<https://www.doi.org/10.1016/j.jct.2018.04.010>
<https://www.doi.org/10.1016/j.fluid.2012.12.001>
<https://www.doi.org/10.1021/acs.jced.5b00989>
<https://www.doi.org/10.1016/j.fluid.2017.05.008>
<https://www.doi.org/10.1016/j.fluid.2014.01.028>
<https://www.doi.org/10.1021/acs.jced.9b00145>
<https://www.doi.org/10.1021/acs.jced.6b00563>
<https://www.doi.org/10.1021/acs.jced.8b00015>
<https://www.doi.org/10.1016/j.jct.2014.04.012>
<https://www.doi.org/10.1016/j.fluid.2019.112249>
<https://www.doi.org/10.1021/je200856f>
<https://www.doi.org/10.1021/acs.jced.8b00895>
<https://www.doi.org/10.1016/j.jct.2018.11.019>
<https://www.doi.org/10.1016/j.jct.2018.10.003>
<https://www.doi.org/10.1016/j.fluid.2019.01.025>
<https://www.doi.org/10.1016/j.tca.2012.05.031>
<https://www.doi.org/10.1021/je400045d>
<https://www.doi.org/10.1021/acs.jced.9b00474>
<https://www.doi.org/10.1016/j.fluid.2014.08.017>
<https://www.doi.org/10.1021/acs.jced.9b00717>
<https://www.doi.org/10.1021/acs.jced.9b00254>
<https://www.doi.org/10.1016/j.fluid.2017.03.008>
<https://www.doi.org/10.1016/j.fluid.2013.10.032>
<https://www.doi.org/10.1016/j.tca.2014.11.028>
<https://www.doi.org/10.1016/j.jct.2012.05.008>
<https://www.doi.org/10.1021/acs.jced.9b00313>
<https://www.doi.org/10.1021/acs.jced.9b00436>
<https://www.doi.org/10.1021/acs.jced.6b01013>
<https://www.doi.org/10.1016/j.fluid.2013.06.015>
<https://www.doi.org/10.1021/acs.jced.6b00569>
<https://www.doi.org/10.1016/j.jct.2019.01.018>
<https://www.doi.org/10.1016/j.tca.2016.11.008>
<https://www.doi.org/10.1016/j.tca.2011.11.036>
<https://www.doi.org/10.1016/j.fluid.2013.07.012>
<https://www.doi.org/10.1021/acs.jced.6b00680>
<https://www.doi.org/10.1016/j.fluid.2016.08.013>
<https://www.doi.org/10.1016/j.tca.2012.04.030>
<https://www.doi.org/10.1016/j.fluid.2018.01.017>
<https://www.doi.org/10.1021/acs.jced.8b00162>
<https://www.doi.org/10.1016/j.fluid.2015.03.025>

High-pressure volumetric properties of choline chloride-ethylene glycol based deep eutectic solvents and potential Green Solvent: A comprehensive study of the thermophysical properties and critical evaluation of literature data: Densities of Ammonium and Phosphonium based Deep Eutectic Solvents: Determination of Azeotropic Distillation Using Low Transition Temperature Mixtures as Entrainers: Properties of NH₃ in Glycerin and its Vapor-Liquid Equilibria Study of the Aqueous Systems Containing (Choline Chloride + Carbon Dioxide) and Their Eutectic Mixtures of Choline Chloride and Polyhydric Alcohols formulation by eutectic formation: Study of the pseudo-ternary aqueous two-phase systems of deep eutectic solvents (choline chloride:sugars) + K₂HPO₄ + water: Thermophysical characterization of the deep eutectic solvent choline chloride-ethylene glycol and its mixtures with water: Experimental Investigation of Liquid-Liquid Extraction of Toluene + Application to the Eutectic and Using Gas-Liquid Equilibrium rules for predicting the azeotropic composition of choline chloride-ethylene glycol based deep eutectic solvents: of high pressure CO₂ and deep eutectic solvents formed by choline chloride-ethylene glycol and thionephene by novel deep eutectic solvents: choline chloride-formamide solvents with organic chloride-based salts: enthalpy of mixing and refractive indices of choline chloride-based deep eutectic solvents with water: Solubility of short-chain alcohols in Deep Eutectic Solvents by Phenols and Choline Chloride and Choline Chloride-Based Deep Eutectic Solvents as Extractants for the Separation of MEK and Ethanol from Water Mixtures (Eutectic) as novel entrainers in extractive distillation: Effect of urea on the Density, Viscosity, and CO₂ Solubility in Choline Chloride and Urea: Thermodynamic properties of NH₃ in choline chloride-ethylene glycol based deep eutectic solvents: distillation using low transition temperature mixtures as entrainers: mixtures of (choline chloride + glucose) deep eutectic solvents:

<https://www.doi.org/10.1016/j.tca.2012.07.024>
<https://www.doi.org/10.1016/j.jct.2018.07.031>
<https://www.doi.org/10.1021/je700638u>
<https://www.doi.org/10.1016/j.tca.2011.10.010>
<https://www.doi.org/10.1021/acs.jced.8b00228>
<https://www.doi.org/10.1021/acs.jced.8b01042>
<https://www.doi.org/10.1021/acs.jced.9b00076>
<https://www.doi.org/10.1021/je400884v>
<https://www.doi.org/10.1016/j.fluid.2017.05.009>
<https://www.doi.org/10.1016/j.fluid.2017.05.018>
<http://webbook.nist.gov/cgi/cbook.cgi?ID=C67481&Units=SI>
<https://www.doi.org/10.1016/j.fluid.2019.03.018>
<https://www.doi.org/10.1016/j.jct.2018.04.015>
<https://www.doi.org/10.1021/acs.jced.9b00237>
<https://www.doi.org/10.1016/j.tca.2013.10.017>
<https://www.doi.org/10.1016/j.tca.2012.09.041>
<https://www.doi.org/10.1016/j.fluid.2016.08.020>
<https://www.doi.org/10.1016/j.fluid.2018.11.025>
<https://www.doi.org/10.1016/j.fluid.2019.04.019>
<https://www.doi.org/10.1016/j.jct.2016.10.002>
<https://www.doi.org/10.1016/j.jct.2013.07.025>
<https://www.doi.org/10.1021/je300997v>
<https://www.doi.org/10.1021/acs.jced.5b00717>
<https://www.doi.org/10.1016/j.fluid.2014.10.044>
<https://www.doi.org/10.1016/j.jct.2018.09.020>
<https://www.doi.org/10.1021/je500320c>
<https://www.doi.org/10.1016/j.jct.2019.01.031>
<https://www.doi.org/10.1016/j.jct.2015.02.003>
<https://www.doi.org/10.1016/j.jct.2018.09.029>

Legend

tf: Normal melting (fusion) point
 tt: Triple Point Temperature

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