

The Data Bank for Electrolyte Solutions at CERE DTU Chemical Engineering

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The Data Bank for Electrolyte Solutions at CERE DTU Chemical Engineering is a compilation of experimental data for aqueous solutions of electrolytes and/or non-electrolytes from the open literature. Most of the experimental data concern aqueous solutions. Some of these solutions also contain non-electrolytes like alcohols, alkanolamines, amines, acetone or sucrose. Over 350 different solute species appear in these data. The data were found in more than 3000 scientific papers and reports. Most data are stored as the raw data that appeared in the original publications. Upon retrieval, the data are converted to molality units from the more than 40 different concentration units appearing in the original papers. Data originally reported in volumetric units are converted to molality by use of densities if available. Otherwise a simple correlation for density is used. Access to browse the databank at http://www.cere.dtu.dk/Expertise/Data_Bank.aspx is free and data can be ordered free of charge for research purposes. The experimental data are not stored at the web site. Instead there is a list of the literature sources with information on the number and type of data in each publication. The around 150,000 experimental data currently stored electronically include the following types of data:

- Activity/Osmotic coefficients in binary and ternary solutions
- Degree of dissociation
- Apparent relative molal enthalpy
- Heat of dilution
- Heat of solution
- Apparent molal heat capacity
- Heat capacity
- Density
- Gas solubility (CO₂, SO₂, NH₃, O₂, H₂S, N₂)
- Vapor pressure of pure gases
- Gas Hydrate formation (CO₂, H₂S)
- Solid-liquid equilibrium in binary, ternary and quaternary solutions
- Liquid-liquid equilibrium
- Vapor-liquid equilibrium