

The Unified Theory of Electrolytes

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A new theoretical treatment has been developed for predicting the thermodynamic properties of electrolytes up to and beyond the critical temperature of water (873 K and at pressures up to 1000 MPa) [1]. The model is based upon the classical Born equation corrected for non-Born hydration effects. The temperature and pressure behaviors of electrolytes have been accurately predicted from existing low temperature handbook data and only two arbitrary constants for each electrolyte at all temperatures and pressures where data exist to test the theory.

[1] E. Djamali, Ph.D. Dissertation, University of California, San Diego and San Diego State University, (2005).