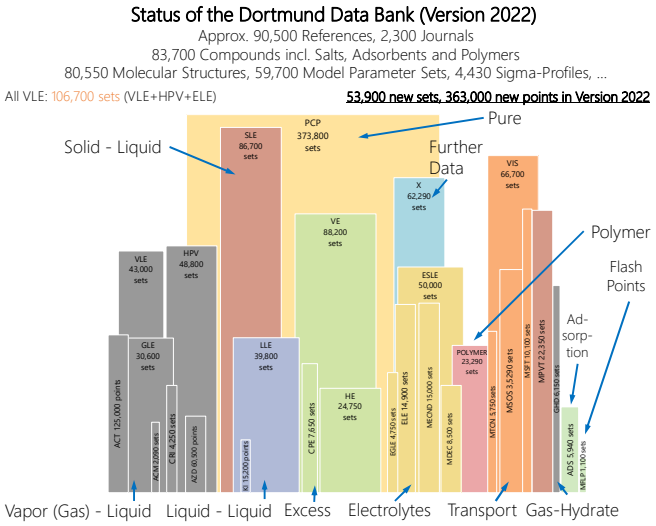
DDBST
Dortmund Data Bank
Software & Separation
Technology

Dortmund Data Bank 2022

Development and Current Status of The Dortmund Data Bank

With a view to the synthesis and design of separation processes, fitting and critical examination of model parameters used for process simulation and the development of group contribution methods 1973 a computerized data bank for phase equilibrium data was started by J. Gmehling and U. Onken at the University of Dortmund.

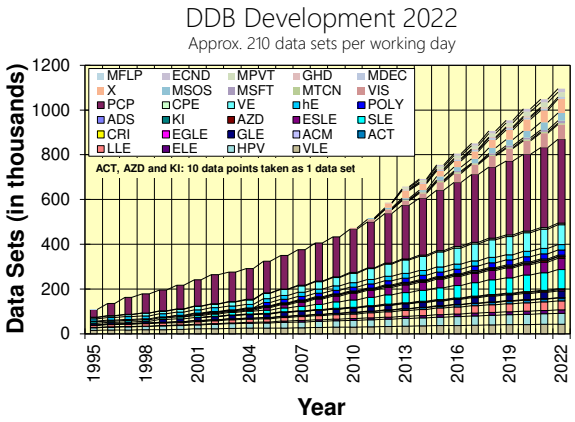
While at the beginning mainly VLE data for non-electrolyte mixtures (T_b > 0 °C) were considered, later on also VLE including compounds with T_b < 0°C, LLE, h^E, γ^∞, azeotropic, c_P^E, SLE, v^E, adsorption equilibrium, polymer data, ... for non-electrolyte and electrolyte systems as well as pure component properties were stored. The DDB currently contains nearly 9.5 million data tuples for 83,700 components from 90,500 references.



The Dortmund Data Bank now contains nearly all worldwide available phase equilibrium data, excess properties and pure component properties even for polymer systems. The current status can be seen above.

Besides the easily accessible thermo-physical properties from scientific literature (J. Chem. Eng. Data, J. Chem. Thermodyn., Fluid Phase Equilib., Thermochim. Acta, and Int. J. Thermophys.), DDB contains a great part of data not available via the open literature (systematic measurements for the development of predictive tools, private communications, confidential data from industry, BSc., MSc. and Ph.D. theses, ... from all over the world). These data will not be provided by online-services and are not made available to competitors of DDBST GmbH.

The DDB is available under several different software platforms. DDBST GmbH offers various in-house versions together with an integrated software system for data retrieval, storage, correlation, visualization and property estimation.
The DDB Software also contains highly developed process synthesis tools for the selection of entrainer for extractive and azeotropic distillation, extraction, ...
DDB software interfaces to the Aspen Plus®, EPCON, CHEMCAD and ProSim® process simulators for parameter and data interchange. In addition, Aspen Plus®, Pro/II® and UNISIM® property packages can be accessed in order to verify physical property parameters prior to process simulation.



The regular yearly update of the DDB can be judged from the figure above. DDB grows by more than 8% per year in data volume. Nearly all data input is done at DDBST GmbH in Oldenburg by long term employees with many years of experience with support from colleagues in China, Japan, Korea, Estonia, Russia, ...

DDBST GmbH offers a free online search of the DDB and a free DDB Explorer Edition (www.ddbst.com).