

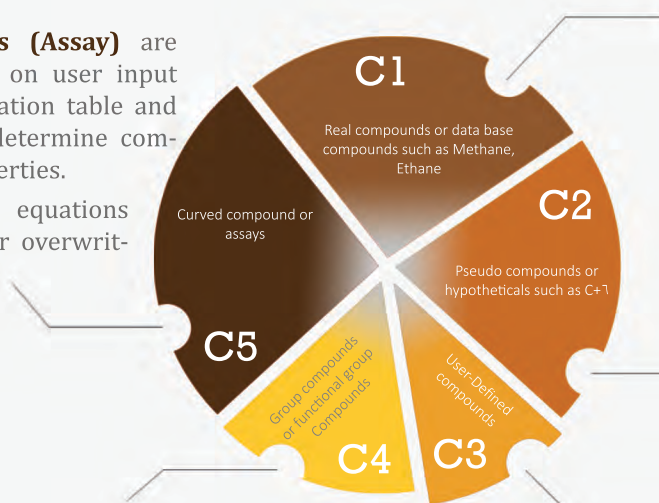
NAFTPack

Fully Extensible Thermodynamic Server

NAFTPack is a fully extensible thermodynamic engine which calculates physical properties based on pre-defined PP packages and provides a platform to define (create) PP packages for any user requested properties.

Curved compounds (Assay) are characterized based on user input TBP or ASTM distillation table and bulk properties to determine compound's critical properties.

All characterization equations can be configured or overwritten by the user."



Real compounds have identical CAS No., and their constant/temperature dependent properties are stored in software database. New properties for existing compounds and even new compounds could be added to the database via provided tools.

Pseudo compounds are characterized based on user input Watson-K, API & Mw to determine compound's critical properties. All characterization equations can be set by user or be overwritten by new correlations.

Group compounds are characterized based on user input data for group contribution elements to determine critical properties. All characterization equations can be defined by the user or overwritten with a new group contribution table and methods.

User Defined compounds could be defined in NAFTPack based on user input data for their fixed, critical, temperature-dependent properties.

Creating Stream & Defining Phases

After selecting or creating different types of compounds, they would be added to stream(s). Each stream can handle four phases (liquid, vapor, solid & user-defined) in which the physical property package can be set or created by user.

By setting stream required parameters (such as temperature, pressure or enthalpy) and then adjusting related flash calculation variables, user would be able to calculate all required thermo-physical properties.

