

CAPE-OPEN Update in PRO/II v9.4 & v9.3

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CAPE-OPEN Update in PRO/II v9.4 & v9.3

- **Agenda**

- **CAPE-OPEN Update in PRO/II v9.4**

- CAPE-OPEN Thermo Property Package Persistence Support in v9.4

- **CAPE-OPEN Update in PRO/II v9.3**

- Improvements in v9.3

CAPE-OPEN Update in PRO/II v9.4

- **CAPE-OPEN Thermo Property Package Persistence Support**

- **Usability until PRO/II v9.3:**

- The prz or input file created, having Property Package, on one machine is not usable on another machine unless the Property Package with the same name is available on that machine. The required Thermosystem or Property Package Manager installation should be available on that machine.
- So to make use of prz or input file, Property Package with the same name should be created on that machine using Third Party native GUI (outside PRO/II).

CAPE-OPEN Update in PRO/II v9.4

- CAPE-OPEN Thermo Property Package Persistence Support

- Advantage from PRO/II v9.4 onwards:

- Create the prz or input file on one machine and use it on any machine provided that the Property Package supports persistence. No need to create the Property Package on each machine. The required Thermosystem or Property Package Manager installation should be available on that machine.
- The persistence file with default naming convention of “*prz file name_Thermo set name_PP.dat*” is created if Property Package supports persistence. (Example: “Testcase_CO1_PP.dat”).
- The persistence file is available inside the prz.
- There is no change in the existing behavior if the Property Package doesn't support persistence.

CAPE-OPEN Update in PRO/II v9.3

- **Improvements in PRO/II v9.3**

- Use State of Aggregation in identifying the phases for Material Object using CAPE-OPEN thermo v1.1.
- Avoid excessive amount of time taken to open the CAPE-OPEN Petroleum Fractions Unit Operation (HxSTAR) GUI or CAPE-OPEN Settings DEW for the first time.
- Implement ICapelIdentification on the Simulation Context object.
- Improve error handling.

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- Improvements in PRO/II v9.3

- Add support for AromaticsMono, AromaticsDi, AromaticsTri and AromaticsTetra, Oxygen Content, IP Aromatics (Total), Paraffin Content (Total), Aromatics (Total), flash point temperature (Close Cup) and V50 Value through CAPE-OPEN Petroleum Fraction Interface.
- Improve dimensionality system mapping for CAPE-OPEN unit real Parameters to equivalent PRO/II UOM class.
- Separate lists for GetSinglePhasePropList() & GetTwoPhasePropList() for MO using CAPE-OPEN Thermo v1.1.

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- Improvements in PRO/II v9.3

- Alert the user with a message that PRO/II will use its own flash algorithm, if CalcEquilibrium() of CAPE-OPEN Thermo has failed.
- Provide consistent upwards capability – Opening the old version prz file in the latest version of PRO/II.
- GetTDependentPropList() and GetTDependentProperty() of CAPE-OPEN Thermo v1.1 are fully supported.
- Expose the compound constant "ChemicalFormula".

CAPE-OPEN Update in PRO/II v9.3

- **Improvements in PRO/II v9.3**

- Support Real parameters that were added after CAPE-OPEN Unit Operation is created (i.e parameters added dynamically) through Spec/vary/Define.
- Call SetMaterialObject() before CheckEquilibriumSpec() for CAPE-OPEN thermo v1.1 Property Package (PP). Without SetMaterialObject called before CheckEquilibriumSpec, a PP has no way to figure out what are the phases to be considered during the flash.
- Improve the message handling when
 - Surface tension with only one phase exists.
 - Property Package doesn't support specified flash

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Q & A