

NIST releases major update of popular REFPROP database

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The National Institute of Standards and Technology has released an expanded and upgraded version of a popular database, a computer package for calculating the properties and modeling the behavior of fluids.

Data on key components of alternative fuels, such as ethanol and hydrogen, are among the many new additions to NIST's Reference Fluid Thermodynamic and Transport Properties Database Version 8.0, which provides critically evaluated property values needed to evaluate fluids and optimize related equipment and processes.

Widely used by industrial, academic, and government scientists, the database originally was called Refrigerant Properties and was limited to thermophysical properties of alternative refrigerants. When the previous version was issued in 2002, the name was changed to Reference Properties, denoting a broader range of fluids including some natural gas components. The latest version has been expanded further in response to user requests and NIST efforts to include more of the most widely used fluids.

Among its new features, Version 8.0 provides properties of ethanol, cryogenic fluids, and additional natural gas components. It also includes many new equations, which enable users to plug in variables such as temperature and pressure and find out how a fluid's other properties, such as density and viscosity, stack up. In addition, many other aspects of the program have been enhanced, including the graphical interface.

More information about REFPROP, the NIST Reference Fluid Thermodynamic and Transport Properties Database (SRD 23), is available at www.nist.gov/srd/nist23.htm.

Source: National Institute of Standards and Technology

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