# Erratum: Thermophysical Properties of Fluids. I. Argon, Ethylene, Parahydrogen, Nitrogen, Nitrogen Trifluoride, and Oxygen

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# Erratum: Thermophysical properties of fluids. I. Argon, ethylene, parahydrogen, nitrogen, nitrogen trifluoride, and oxygen

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The tables for argon are not completely consistent with the computer program, as listed in NBS Technical Note 1048,[1] and as contained on magnetic tape, NBS Standard Reference Data Base 6.[2] The reference values used to generate the internal energy, enthalpy, and entropy were $T^\circ = 273.15$ K, $S^\circ = 154.7335$ J/mol·K, and $H^\circ = 9165.5$ J/mol, respectively. For the programs,[1,2] the corresponding values were $T^\circ = 298.15$ K, $S^\circ = 154.7335$ J/mol·K, and $H^\circ = 6196.5$ J/mol. We apologize for the discrepancy but stress that it does not affect the normal use of these quantities necessary for thermodynamic calculations, since engineering calculations involve differences in enthalpy and internal energy rather than absolute values.

We have also noted two other errors. The conversion factors of Appendix B, should have $/M_r$ instead of $\cdot M_r$, that is, the numerical factor should be divided by $M_r$, the molecular weight.

On p. 1-11, for Eq. (5), the third term should be changed from

$$\sum_{i=5}^{13} A(i)(1-x)^{(i-4)/3}$$

to

$$\sum_{i=5}^{13} A(i)[1-x^{(i-4)/3}].$$

## References

[1] B. A. Younglove, "Interactive Program to Calculate Thermophysical Properties of Six Fluids," Natl. Bur. Stand. (U.S.) Technical Note 1048, 1982.

[2] B. A. Younglove, Natl. Bur. Stand. (U.S.) Standard Reference Data Base 6. Available from the Office of Standard Reference Data, A320 Physics Building, National Bureau of Standards, Gaithersburg, MD 20899, for $500.00.