

Topic 2750

Standard States; Reference States; Processes.

Pressure:[1] standard pressure 10^5 N m^{-2}

States: Solids: pure solids

Liquids: pure liquids

Gases: ideal gas at standard pressure

Solutions: Simple Solution

Solvent: pure liquid

Solute: ideal solution at unit molality; 1 mol kg^{-1}

Process/Change [2,3,4] $\Delta_{\text{proc}} X^0$

Subscript 'proc' indicates the process. Examples include

f = formation

c= combustion

vap = vaporisation

r = chemical reaction

soln= solution

\neq = activation ; an attempt to represent the classic double dagger symbol suggested by Eyring . The symbol is written as a superscript; e.g.

$\Delta^\ddagger V^0$ = standard volume of activation.

Example ; $\Delta_c H^0$ = standard enthalpy of combustion.

Footnotes

[1] R. D. Freeman, Bull. Chem. Thermodyn., 1982, **25**, 523.

[2] Pure Appl. Chem., 1982, **54**, 1239.

[3] M. L. McGlashan, Physico-Chemical Quantities and Units,
RIC, London, Number 15, 1971.

[4] Quantities, Units, Symbols in Physical Chemistry, IUPAC,
Blackwell, Oxford, 1988.