

entropy, S

Quantity the change in which is equal to the heat brought to the system in a reversible process at constant temperature divided by that temperature. Entropy is zero for an ideally ordered crystal at 0 K. In statistical thermodynamics

$$S = k \ln W$$

where k is the Boltzmann constant and W the number of possible arrangements of the system.

Source:

Green Book, 2nd ed., p. 48

PAC, 1990, 62, 2167 (*Glossary of atmospheric chemistry terms (Recommendations 1990)*) on page 2187

PAC, 1996, 68, 957 (*Glossary of terms in quantities and units in Clinical Chemistry (IUPAC-IFCC Recommendations 1996)*) on page 972