Int. J. Heat Mass Transfer. Vol. 14, p 651. Pergamon Press 1971. Printed in Great Britain

EDITORIAL ANNOUNCEMENT

THE INTERNATIONAL SYSTEM OF UNITS

AN EARLIER Announcement [1] recommended authors to use the International System of Units (SI) and provided a detailed description of the system. For convenience, this is now repeated in abbreviated form.

SI is a rigorously coherent version of the metric system. It is constructed from nine independently defined "base" and "supplementary" units (see Table 1); all other units are combinations of the base units in line with the appropriate physical dimensions, without any numerical factors; these are called "derived" units. Thus since two of the base units are the metre (m) and the second (s), and velocity is length divided by time, the derived unit for velocity is the metre per second (m/s). There is accordingly one SI unit only for each physical quantity, and physical equations can be used directly for numerical calculations without the need for conversion factors. Some important derived units have been given special names, which may be used in combination, so that one unit may appear in several different forms (see Table 2). The familiar metric prefixes may be applied to SI units.

Care should be taken to avoid confusion with the conventional metric system. Thus the calorie is not an SI unit; nor are the kilogram-force, the angstrom unit, the atmosphere, the torr, the poise, and many others. A list of most of the SI units likely to be needed by readers of the *Journal* was included in the earlier Announcement, together with references to other sources of information.

REFERENCE

1. *Int. J. Heat Mass Transfer* **9**, 837–844 (1966).

Table 1. Base and supplementary SI units

Quantity	Name of unit	Unit symbol
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Quantity of matter	mole	mol
Plane angle	radian	rad
Solid angle	steradian	sr

Table 2. Examples of derived SI units

Quantity	Name(s) of unit	Unit symbol where differing from basic form	Unit expressed in terms of base units
Density, concentration	kilogram per cubic metre		kg/m^3
Force	newton	N	$kg\ m/s^2$
Pressure	newton per square metre, pascal	N/m^2, Pa	$kg/m.s^2$
Viscosity, dynamic	newton-second per square metre, pascal-second	$N\ s/m^2$, Pa s	kg/m.s
Viscosity, kinematic; diffusivity	metre squared per second		m^2/s
Work, energy, quantity of heat	joule, newton-metre, watt-second	J, N m, W s	$kg\ m^2/s^2$
Power, heat flux	watt, joule per second	W, J/s	$kg\ m^2/s^3$
Heat-transfer coefficient	watt per square metre kelvin	$W/m^2\ K$	$kg/s^3\ K$
Heat capacity (specific)	joule per kilogram kelvin	J/kg K	$m^2/s^2\ K$
Thermal conductivity	watt per metre kelvin	W/m.K	$kg\ m/s^3\ K$
Mass flux, mass flow rate	kilogram per second		kg/s