

### L4.5 Prefixes

To signify decimal multiples and submultiples of SI units the following prefixes may be used

<i>Submultiple</i>	<i>Prefix</i>	<i>Symbol</i>	<i>Multiple</i>	<i>PrefixSymbol</i>	
$10^{-1}$	deci	d	10	deca	da
$10^{-2}$	centi	c	$10^2$	hecto	h
$10^{-3}$	milli	m	$10^3$	kilo	k
$10^{-6}$	micro	$\mu$	$10^6$	mega	M
$10^{-9}$	nano	n	$10^9$	giga	G
$10^{-12}$	pico	p	$10^{12}$	tera	T
$10^{-15}$	femto	f	$10^{15}$	peta	P
$10^{-18}$	atto	a	$10^{18}$	exa	E
$10^{-21}$	zepto	z	$10^{21}$	zetta	Z
$10^{-24}$	yocto	y	$10^{24}$	yotta	Y

Prefix symbols should be printed in roman (upright) type with no space between the prefix and the unit symbol.

*Example* kilometre, km

When a prefix is used with a unit symbol, the combination is taken as a new symbol that can be raised to any power without the use of parentheses.

*Examples*  $1 \text{ cm}^3 = (0.01 \text{ m})^3 = 10^{-6} \text{ m}^3$   
 $1 \mu\text{s}^{-1} = (10^{-6} \text{ s})^{-1} = 10^6 \text{ s}^{-1}$   
 $1 \text{ V/cm} = 100 \text{ V/m}$   
 $1 \text{ mmol/dm}^3 = 1 \text{ mol m}^{-3}$

A prefix should never be used on its own, and prefixes are not to be combined into compound prefixes.

*Example* pm, not  $\mu\mu\text{m}$

The names and symbols of decimal multiples and submultiples of the SI base unit of mass, the kg, which already contains a prefix, are constructed by adding the appropriate prefix to the word gram and symbol g.

*Examples* mg, not  $\mu\text{kg}$ ; Mg, not kkg

The SI prefixes are not to be used with  $^{\circ}\text{C}$ .