GUYANA

No. 23 of 1998

See also 21/7/1998 circa 12th Sept and at B107

ORDER

Made Under

THE WEIGHTS AND MEASURES ACT

(No.15 of 1981)

IN EXERCISE OF THE POWERS CONFERRED UPON ME BY SECTIONS 3(11) AND 11(8) OF THE WEIGHTS AND MEASURES ACT 1981, I HEREBY MAKE THE FOLLOWING ORDER:-

Citation and Commencement.

1. This Order may be cited as the Weights and Measures (Amendment of Schedules to the Act) Order 1998 and shall come into operation on the 1st October, 1998.

Amendment of Schedules to the Act.

2. The First, Second, Third, Fourth, Fifth, Sixth, Seventh, Eighth and Tenth Schedules to the Act are hereby amended by the substitution for the Schedules thereto of the Schedules hereto.

s. 3(5)

FIRST SCHEDULE

BASE UNITS

Physical Quantity	Unit Name	Unit Symbol	Definition
length	metre	m	the metre is the length of the path travelled by light in vacuum during a time interval of 1/299 792 458 of a second.
mass	kilogram	kg	the kilogram is the unit of mass; it is equal to the mass of the international prototype of the kilogram.
time	second	s	the second is the duration of 9 192 631 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium-133 atom.
electric current	ampere	A	the ampere is that constant current which, if maintained in two straight parallel conductors of infinite length, of negligible circular cross-section, and placed 1 metre apart in vacuum, would produce between these conductors a force equal to 2×10^{-7} newton per metre of length.
thermodynamic temperature	kelvin	K	the kelvin, unit of thermodynamic temperature, is the fraction 1/273.16 of the thermodynamic temperature of the triple point of water.
amount of substance	mole	mol	the mole is the amount of substance of a system which contains as many elementary entities as there are atoms in 0.012 kilogram of carbon 12. When the mole is used, the elementary entities must be specified and may be atoms, molecules, ions, electrons, other particles or specified groups of such particles.
luminous intensity	candela	cd	the candela is the luminous intensity, in a given direction, of a source that emits monochromatic radiation of frequency 540×10^{12} hertz and that has a radiant intensity in that direction of (1/683) watt per steradian.

s. 3(5)

SECOND SCHEDULE

SUPPLEMENTARY UNITS

Physical Quantity	Unit Name	Unit Symbol	Definition

Plane angle and solid angle which were previously classified as Supplementary Units are now classified as Derived Units with Special Names.

s. 3(5)

THIRD SCHEDULE

DERIVED UNITS

SI DERIVED UNITS EXPRESSED IN TERMS OF BASE UNITS

Physical Quantity	Unit Name	Unit Symbol
Area	square metre	m^2
Volume	cubic metre	m^3
Speed, velocity	metre per second	m/s; $m.s^{-1}$
Acceleration	metre per second squared	m/s^2; $m.s^{-2}$
Wave number	1 per metre; reciprocal metre	m^{-1}
Density, mass density	kilogram per cubic metre	kg/m^3; $kg.m^{-3}$
Current density	ampère per square metre	A/m^2; $A.m^{-2}$
Magnetic field strength	ampere per metre	A/m; $A.m^{-1}$
Concentration (of amount of substance)	mole per cubic metre	mol/m^3; $mol\ m^{-3}$
Specific volume	cubic metre per kilogram	m^3/kg; $m^3\ kg^{-1}$
Luminance	candela per square metre	cd/m^2; $cd\ m^{-2}$
Moment of inertia	kilogram square metre	$kg.m^2$
Kinematic viscosity	metre squared per second	$m^2.s^{-1}$
Magnetic moment	ampere square metre	$A.m^2$

SI DERIVED UNITS WITH SPECIAL NAMES

Physical Quantity	Unit Name	Unit Symbol	Expression in terms of other Units	Expression in terms of Base , and Supplementary Units
Plane angle	radian	rad	-	rad
Solid angle	steradian	sr	-	sr
Frequency	hertz	Hz	-	s^{-1} or 1/s
Force	newton	N	-	$kg.m/s^2$; $kg.m.s^{-2}$
Pressure, stress	pascal	Pa	N/m^2	$kg.m^{-1}.s^{-2}$
Energy, work, quantity of heat	joule	J	N.m	$kg.m^2.s^{-2}$
Power	watt	W	J/s	$kg.m^2.s^{-3}$
Quantity of electric charge	coulomb	C	-	A.s
Electric potential, potential difference, electromotive force	volt	V	W/A or J/C	$kg.s^{-3}.m^2.A^{-1}$
Capacitance	farad	F	C/V	$kg^{-1}.m^{-2}.s^4.A^2$
Electric resistance	ohm	Ω	V/A	$kg.m^2.s^{-3}.A^{-2}$
Conductance	siemens	S	A/V	$kg^{-1}.m^{-2}.s^3.A^2$
Magnetic flux	weber	Wb	V.s	$kg.m^2.s^{-2}.A^{-1}$
Magnetic flux density	tesla	T	Wb/m^2	$kg.s^{-2}.A^{-1}$
Inductance	henry	H	Wb/A	$kg.m^2.s^{-2}.A^{-2}$
Luminous flux	lumen	lm	-	cd.sr
Illuminance	lux	lx	lm/m^2	$cd.sr.m^{-2}$
Absorbed dose of ionizing radiation	gray	Gy	J/kg	$m^2.s^{-2}$

Activity (of a radionuclide)	becquerel	Bq	-	s^{-1}
Celsius temperature	degree Celsius	°C	-	K
Volume	litre	L	-	dm^3

SI DERIVED UNITS EXPRESSED BY MEANS OF SPECIAL NAMES AND BASE UNITS AND SUPPLEMENTARY UNITS

Physical Quantity	Unit Name	Unit Symbol	Expression in terms of Base and Supplementary Units
Angular acceleration	radian per second squared	$rad.s^{-2}$	s^{-2}
Angular speed	radian per second	$rad.s^{-1}$	s^{-1}
Dynamic viscosity	pascal second	Pa.s	$kg.m^{-1}.s^{-1}$
Moment of force	newton metre	N.m	$kg.s^{-2}.m^2$
Surface tension	newton per metre	N/m	$kg.s^{-2}$
Power density, heat flux density, irradiance	watt per square metre	W/m^2	$kg.s^{-3}$
Heat capacity, entropy	joule per kelvin	J/K	$m^2.kg.s^{-2}.K^{-1}$
Specific heat capacity, specific entropy	joule per kilogram kelvin	J/(kg.K)	$m^2.s^{-2}.K^{-1}$
Specific energy	joule per kilogram	J/kg	$m^2.s^{-2}$
Thermal conductivity	watt per metre kelvin	W/(m.K)	$m.kg.s^{-3}.K^{-1}$
Energy density	joule per cubic metre	J/m^3	$m^{-1}.kg.s^{-2}$
Electric field strength	volt per metre	V/m	$kg.m.s^{-3}.A^{-1}$
Electric charge density	coulomb per cubic metre	C/m^3	$m^{-3}.s.A$

Electric flux density	coulomb per square metre	C/m^2	$m^{-2}.s.A$
Permittivity	farad per metre	F/m	$kg^{-1}.m^{-3}.s^4.A^2$
Permeability	henry per metre	H/m	$kg.m.s^{-2}.A^{-2}$
Molar energy	joule per mole	J/mol	$kg.m^2.s^{-2}.mol^{-1}$
Molar entropy, molar heat capacity	joule per mole kelvin	J/(mol.K)	$kg.m^2.s^{-2}.K^{-1}.mol^{-1}$
Exposure (X or γ rays)	coulomb per kilogram	C/kg	$kg^{-1}.s.A$
Absorbed dose rate	gray per second	Gy/s	$m^2.s^{-3}$
Conductivity (electrical)	siemens per metre	S/m	$kg^{-1}.m^{-3}.s^3.A^2$
Radiant intensity	watt per steradian	W/sr	$m^2.s^{-3}.kg.sr^{-1}$
Radiance	watt per square metre steradian	$W/(m^2.sr)$	$kg.s^{-3}.sr^{-1}$

s. 3(6)

FOURTH SCHEDULE

PART 1
SPECIAL (OR PERMITTED) UNITS

Physical Quantity	Unit Name	Unit Symbol	Definition
Time	minute	min	1 min = 60 s
	hour	h	1 h = 60 min
	day	d	1 d = 24 h
	week	wk	1 wk = 7 d
	calendar year	yr	1 yr = 365 d (366 d in leap year)
plane angular measure	degree	°	1° = π/180 rad
			minute' 1' = 1°/60 rad
	second	"	1" = 1'/60 rad
	revolution	r	1 r = 2π rad
mass	tonne	t	1 t = 1 000 kg = 1 Mg
area	hectare	ha	1 hectare = 10 000 m^2
temperature	degree Celsius	°C	1°C = 1 K (for temperature intervals)
marine and aerial navigation	nautical mile	M	1 M = 1 852 m
	knot	knot	1 knot = 1 M/h
linear density	tex	tex	1 tex = 1 g/km

NOTE: Special (or permitted) units are internationally agreed units which are deviations from strict SI. They are permitted either because if their practical importance or because of their use in specialised scientific fields.

PART II

UNITS USED WITH SI IN SPECIALISED SCIENTIFIC FIELDS

Unit Name	Unit Symbol	Definition
Electronvolt	eV	1 eV = 1.602 177 33 x 10^{-19} J
Unified atomic mass	u	1 u = 1.660 540 2 x 10^{-27} kg
astronomical unit	AU	1 AU = 149.597 870 x 10^{9} m
parsec	pc	1 pc = 30.857 x 10^{15} m

s. 3(7)

FIFTH SCHEDULE

PREFIXES FOR MULTIPLES AND SUB-MULTIPLES OF SI

Prefix		Symbol	Definition
yotta	Y	10^{24}	
zetta	Z	10^{21}	
exa	E	10^{18}	
peta	P	10^{15}	
tera	T	10^{12}	
giga	G	10^{9}	
mega	M	10^{6}	
kilo	k	10^{3}	
hecto	h	10^{2}	
deca	da	10^{1}	

deci	d	10^{-1}
centi	c	10^{-2}
milli	m	10^{-3}
micro	μ	10^{-6}
nano	n	10^{-9}
pico	p	10^{-12}
femto	f	10^{-15}
atto	a	10^{-18}
zepto	z	10^{-21}
yocto	y	10^{-24}

s. 3(8)

SIXTH SCHEDULE

DEFINITION OF UNITS OF MEASUREMENT

PART I

Measurement of length

kilometre	(km)	=	1 000 m
metre	(m)	=	as defined in First Schedule
decimetre	(dm)	=	0.1 m
centimétre	(cm)	=	0.01 m
millimetre	(mm)	=	0.001 m

PART II

Measurement of Area

hectare	(ha)	=	10 000 m^2
square metre	(m^2)	=	a superficial area equal to that of a square each side of which measures one metre

square decimetre	(dm^2)	=	0.01 m^2
square centimetre	(cm^2)	=	0.01 dm^2
square millimetre	(mm^2)	=	0.01 cm^2

PART III

Measurement of Volume and Capacity

cubic metre	(m^3)	=	A volume equal to that of a cube each edge of which measures one metre.
cubic decimetre	(dm^3)	=	0.001 m^3
cubic centimetre	(cm^3)	=	0.001 dm^3
hectolitre	(hL)	=	100 L
litre	(L)	=	a capacity equal to that of a cube each edge of which measures 1 decimetre
decilitre	(dL)	=	0.1 L
centilitre	(cL)	=	0.01 L
millilitre	(mL)		0.001 L

PART IV

Measurement of Mass or Weight

metric ton or tonne	(t)	=	1 000 kg
kilogram	(kg)	=	as defined in First Schedule
gram	(g)	=	0.001 kg
carat		=	200 mg
milligram	(mg)	=	0.001 g

PART V

Measurement of Electricity

ampere	(A)	=	as defined in First Schedule
ohm	(Ω)	=	as defined in Third Schedule
volt	(V)	=	as defined in Third Schedule
watt	(W)	=	as defined in Third Schedule
kilowatt	(kW)	=	1 000 W
megawatt	(MW)	=	1 000 000 W

PART VI

Measurement of Time

hour	(h)	=	60 min
minute	(min)	=	60 s
second	(s)	=	as defined in First Schedule

s. 3(9)

SEVENTH SCHEDULE

WEIGHTS AND MEASURES LAWFUL FOR USE IN TRADE

1. For Linear Measures, the measures shall be millimetres (mm), centimetres (cm), metres (m), or kilometres (km).

2. For Square Measures, the measures shall be square centimetres (cm^2), square decimetres (dm^2), square metres (m^2), or the hectare (ha).

3. For Capacity or Volume Measures, the measures shall be millilitres (mL), litres (L) or cubic metres (m^3)

4. For Weights or Mass Measures, the measures shall be grams (g), kilograms (kg), or tonnes (t). For transactions relating to precious stones or pearls, the measure shall be the carat.

5. For Electrical Energy, the measure shall be the kilowatt hour (kW.h).

6. For Time Measures, the measures shall be the second (s), minute (min), hour (h), or day (d).

s. 3(10)

EIGHTH SCHEDULE

RELATIONSHIP BETWEEN SI AND THE STANDARD OF WEIGHTS AND MEASURES REPEALED

The relationship between the SI and the standards of weights and measures repealed shall be calculated using the following:

1 yard	=	9 144/10 000 metre
1 gallon	=	454 609/100 000 000 cubic metre
1 pound	=	45 359 237/100 000 000 kilogram

s. 11(7)

TENTH SCHEDULE

TABLE OF FEES TO BE TAKEN BY INSPECTORS OF WEIGHTS AND MEASURES

			$	c
1	For examining, comparing and stamping all weights within their respective jurisdiction -			
	(a)	Each weight from half a hundred weight to a stone, both included, or 25 kg to 5 kg	150	00
	(b)	Each weight under a stone to a pound, or 10 kg to 500 g	80	00
	(c)	Each set of weights of a pound and under, or 1 kg or under	60	00
	(d)	Each weighing machine and steelyard	60	00
2	For examining, comparing and stamping all wooden measures within their respective jurisdictions -		$	c
	(a)	Each bushel or 4 L (litres)	100	00
	(b)	Each half bushel or 2 L (litres)	100	00
	(c)	Each peck, and all under 1 L (litre) or under	100	00
	(d)	Each yard or metre	100	00
3	For examining, comparing and stamping all measures of capacity of liquids made of copper or other metal, within their respective jurisdictions -		$	c
	(a)	Each five-gallon or 25 L (litres)	100	00
	(b)	Each four-gallon or 20 L (litres)	100	00
	(c)	Each three-gallon or 15 L (litres)	100	00
	(d)	Each two-gallon or 10 L (litres)	100	00
	(e)	Each gallon or 5 L (litres)	100	00
	(f)	Each half-gallon or 2 L (litres)	100	00
	(g)	Each quart or one litre and under	100	00
4	For examining, comparing and sealing all petrol pumps		$	c
	(a)	Each petrol pump	1000	00

Made this 18th day of September, 1998.

Minister of Trade, Tourism and Industry.