



## Useful Formulae

### Approximate weight calculations formulae - Imperial sizes

Squares / Flats	$W \times T \times 1.540$	= kg/ft
Hexagons	$(A/F)^2 \times 1.334$	= kg/ft
Rounds	$(\text{Diameter})^2 \times 1.210$	= kg/ft
$\text{kg/ft} \times 3.2808 = \text{kg/metre}$		

### Approximate weight calculations formulae - Metric sizes

Squares / Flats	$W \times T \times 0.002388$	= kg/ft
Hexagons	$(A/F)^2 \times 0.002068$	= kg/ft
Rounds	$(\text{Diameter})^2 \times 0.001875$	= kg/ft
$\text{kg/ft} \times 3.2808 = \text{kg/metre}$		



## Stress conversions

1 N/mm <sup>2</sup>	= 1 MN/m <sup>2</sup> (Mega pascal)	= 145 lbf/in <sup>2</sup>
		= 0.145 kp.s.i.
		= 6.475 x 10 <sup>-2</sup> t.s.i.

To convert from	To convert to	Factor
t.s.i.	N/mm <sup>2</sup>	x 15.44
N/mm <sup>2</sup>	t.s.i.	x 0.06475
N/mm <sup>2</sup>	p.s.i.	x 145
t.s.i.	p.s.i.	x 2240

1 U.K. t.s.i.	= 2.24 kp.s.i.	= 15.44 N/mm <sup>2</sup>
Brinell Hardness	÷ 4.5	= Approximate tensile strength (t.s.i.)
Brinell Hardness	x 3.4	= Approximate tensile strength (N/mm <sup>2</sup> )

## Energy Conversion - Work

1 ft/lb force	= 1.3558 Joules
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