USEFUL PAPER CALCULATIONS

To calculate weight (kg/1000 sheets) > Given gsm and size in mm

$$\text{Weight (kg) 1000s} = \frac{\text{Length (mm)} \times \text{Width (mm)} \times \text{gsm}}{1{,}000{,}000}$$

eg $\frac{650 \times 910 \times 80}{1{,}000{,}000} = 47.3\text{kg}$ 1000 sheets

To calculate grammage (gsm) > Given weight (kg) per 1000 sheets and size in mm

$$\text{Grammage (gsm)} = \frac{\text{Weight (kg)} \times 1{,}000{,}000}{\text{Length (mm)} \times \text{Width (mm)}}$$

eg $\frac{47.3\text{kg} \times 1{,}000{,}000}{650 \times 910} = 80\text{gsm}$

To calculate the weight of an order > Given number of sheets and kgs/1000 sheets

$$\text{Order Weight} = \frac{\text{kgs/1000} \times \text{Number of sheets}}{1000}$$

eg $\frac{47.3 \times 5000}{1000} = 236.5$ kg

Linear metres in a reel, given weight of reel in kg, width in mm and grammage

$$m = \frac{\text{Weight (kg)} \times 1{,}000{,}000}{\text{gsm} \times \text{Width (mm)}}$$

Number of sheets per tonne, given gsm and required size in mm

$$\text{Sheets per tonne} = \frac{1{,}000{,}000 \times 1{,}000{,}000}{\text{gsm} \times \text{Length (mm)} \times \text{Width (mm)}}$$

To calculate number of square metres per tonne of paper or board, given gsm

$$m^2 = \frac{1{,}000{,}000}{\text{gsm}}$$

To calculate price/m² given tonne price and gsm

$$\text{price/m}^2 = \frac{\text{tonne price (\$)} \times \text{gsm}}{1{,}000{,}000}$$

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