Uses of All Purpose Cement Guide

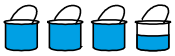
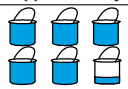
Mixes for concrete

Low-strength concrete

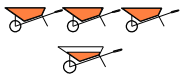
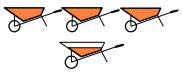
15 MPa

Suitable for un-reinforced foundations for single storey houses and free-standing walls. 1 part All Purpose Cement + 3½ parts coarse sand + 3½ parts stone. To make a mix for 1 cubic metre of low-strength concrete you will need: 5,7 bags of All Purpose Cement + 0,65 cubic metres of coarse sand + 0,65 cubic metres stone. Allow an additional 10% of required quantities for wastage.

Batching by bucket

All Purpose Cement	Coarse sand	Stone	Approximate yield
			
1 Bucket	3½ Buckets	3½ Buckets	5⅓ Buckets

Batching by wheelbarrow

All Purpose Cement	Coarse sand	Stone	Approximate yield
			
2 Bags (1 = 50 kg)	3½ Wheelbarrows	3½ Wheelbarrows	0,35 m³

Quantities per m³ of concrete

All Purpose Cement	Coarse sand	Stone	Approximate yield
			
5,7 Bags (1 = 50 kg)	0,65 m³	0,65 m³	1 m³

Medium-strength concrete

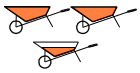
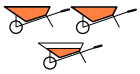
25 MPa

Suitable for reinforced foundations and slabs, light-duty house floors, paths, patios, steps, driveways and garage floors. 1 part All Purpose Cement + 2½ parts coarse sand + 2½ parts stone. To make a mix for 1 cubic metre of medium-strength concrete you will need: 7.7 bags All Purpose Cement + 0,63 cubic metres of coarse sand + 0,63 cubic metres stone. Allow an additional 10% of required quantities for wastage.

Batching by bucket

All Purpose Cement	Coarse sand	Stone	Approximate yield
			
1 Bucket	2½ Buckets	2½ Buckets	4 Buckets

Batching by wheelbarrow

All Purpose Cement	Coarse sand	Stone	Approximate yield
			
2 Bags (1 = 50 kg)	2½ Wheelbarrows	2½ Wheelbarrows	0,26 m³

Quantities per m³ of concrete

All Purpose Cement	Coarse sand	Stone	Approximate yield
			
7.7 Bags (1 = 50 kg)	0,63 m³	0,63 m³	1 m³

Note: Specified strength is the characteristic strength of the mix at an age of 28 days.

High-strength concrete

30 MPa

Suitable for suspended structural beams and slabs, precast items such as flagstones and heavy-duty floors such as workshop floors. 1 part All Purpose Cement +2 parts coarse sand + 2 parts stone. To make a mix for 1 cubic metre of High-Strength concrete you will need: 9.23 bags of All Purpose Cement + 0,6 cubic metres of coarse sand + 0,6 cubic metres stone. Allow an additional 10% of required quantities for wastage.

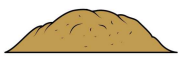
Batching by bucket

All Purpose Cement	Coarse sand	Stone	Approximate yield
			
1 Bucket	2 Buckets	2 Buckets	3⅓ Buckets

Batching by wheelbarrow

All Purpose Cement	Coarse sand	Stone	Approximate yield
			
2 Bags (1 = 50 kg)	2 Wheelbarrows	2 Wheelbarrows	0,22 m³

Quantities per m³ of concrete

All Purpose Cement	Coarse sand	Stone	Approximate yield
			
9.23 Bags (1 = 50 kg)	0,60 m³	0,60 m³	1 m³

Mixes for mortar

Class I - Mortar
Highly stressed masonry incorporating high strength structural units as used in multi-storey load bearing buildings and walls exposed to severe dampness.

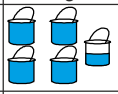
Class II - Mortar Mix A
Exterior/ Exposed to dampness.

Class II - Mix B
Interior/ Dry.

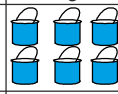
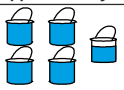
Batching by bucket

All Purpose Cement	Building sand	Approximate yield
		
1 Bucket	4 Buckets	$3^{1}/_{3}$ Buckets

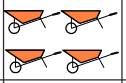
Batching by bucket

All Purpose Cement	Building sand	Approximate yield
		
1 Bucket	$4^{1}/_{2}$ Buckets	$3^{2}/_{3}$ Buckets

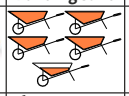
Batching by bucket

All Purpose Cement	Building sand	Approximate yield
		
1 Bucket	6 Buckets	$4^{2}/_{3}$ Buckets

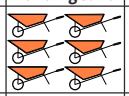
Batching by wheelbarrow

All Purpose Cement	Building sand	Approximate yield
		
2 Bags (1 = 50kg)	4 Wheelbarrows	0,22 m³

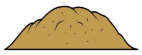
Batching by wheelbarrow

All Purpose Cement	Building sand	Approximate yield
		
2 Bags (1 = 50kg)	$4^{1}/_{2}$ Wheelbarrows	0,24 m³

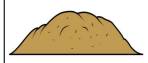
Batching by wheelbarrow

All Purpose Cement	Building sand	Approximate yield
		
2 Bags (1 = 50kg)	6 Wheelbarrows	0,3 m³

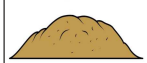
Quantities per m³ of mortar

All Purpose Cement	Building sand	Approximate yield
		
9,23 Bags (1 = 50kg)	1,20 m³	1 m³

Quantities per m³ of mortar

All Purpose Cement	Building sand	Approximate yield
		
8,33 Bags (1 = 50kg)	1,22 m³	1 m³

Quantities per m³ of mortar

All Purpose Cement	Building sand	Approximate yield
		
6,66 Bags (1 = 50kg)	1,3 m³	1 m³

Quantities of popular sizes of masonry units and corresponding mortar requirements
Exterior / Exposed to dampness

Masonry unit type	Masonry unit size (mm)			Masonry units per m² (single leaf wall)	Mortar required in m³	
	Length	Width	Height		Per 1000 units	Per 100 m² of walling
Standard brick	222	106	73	52	0,32	1,66
Maxi brick	290	140	90	34	0,55	1,87
Common Blocks	390 390 390	90 140 190	190 190 190	13 13 13	0,53 0,83 1,12	0,69 1,08 1,46

Quantities for mix B mortar
Interior / Dry

Masonry unit type	Masonry unit size (mm)			50 kg bags of All Purpose Cement per 1000 units	Cubic metres of building sand per 1000 units
	Length	Width	Height		
Standard brick	222	106	73	2,1	0,4
Maxi brick	290	140	90	3,6	0,7
Common Blocks	390 390 390	90 140 190	190 190 190	3,5 5,5 7,4	0,7 1,1 1,4

Notes

1. The tables are based on exact sizes of solid masonry units with 10 mm thick bedding, 10 mm thick vertical joints and no wastage.

2. There are numbers of factors which may influence mortar quantities. The following adjustments should be made:
- To allow for wastage, increase all mortar mix quantities:
  - by 10% for excellent control on site
  - by 30% for average control on site
- For hollow units, reduce mortar quantities by:

Width of units, mm	% Reduction
90-110 mm	20
140 mm	30
190-220 mm	40

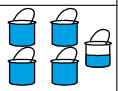
- For units with perforations or holes, increase mortar quantities by 15%.
- For units with frogs with the frog laid face up (as required for structural walls), increase mortar quantities by 15%.

Mixes for plaster

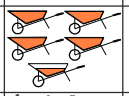
Mix A
Exterior/ Exposed to dampness.

Mix B
Interior/ Dry.

Batching by bucket

All Purpose Cement	Plaster sand	Approximate yield
		
1 Bucket	4½ Buckets	3⅔ Buckets

Batching by wheelbarrow

All Purpose Cement	Plaster sand	Approximate yield
		
2 Bags (1 = 50kg)	4½ Wheelbarrows	0,24 m³

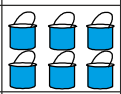
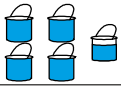
Quantities per m³ of plaster

All Purpose Cement	Plaster sand	Approximate yield
		
8,0 Bags (1 = 50kg)	1,22 m³	1 m³

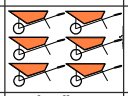
Area of plaster per 2 bag mix

All Purpose Cement	Plaster thickness	Area of wall (m²)
	10 mm	24
	15 mm	16
	20 mm	12

Batching by bucket

All Purpose Cement	Plaster sand	Approximate yield
		
1 Bucket	6 Buckets	4⅔ Buckets

Batching by wheelbarrow

All Purpose Cement	Plaster sand	Approximate yield
		
2 Bags (1 = 50kg)	6 Wheelbarrows	0,3 m³

Quantities per m³ of plaster

All Purpose Cement	Plaster sand	Approximate yield
		
6,0 Bags (1 = 50kg)	1,3 m³	1 m³

Area of plaster per 2 bag mix

All Purpose Cement	Plaster thickness	Area of wall (m²)
	10 mm	30
	15 mm	20
	20 mm	15

Water usage:
Use sufficient water for the workable mixture. Excessive water will result in a reduced strength.

Re-tempering:
All mixes should be used up within a maximum of two hours after being mixed.
Mixes should never be re-tempered by mixing in additional water, as this reduces the strength of the mix.

Curing:
After your concrete, mortar and plaster work has been completed, it is essential to protect it from the sun and wind by covering it with a plastic sheet, or a fine material net to keep it moist for a minimum of 7 days.

Cold weather conditions:
Concrete, mortars and plasters must be protected from freezing