





# THE SANDPIT

## Mixes for concrete


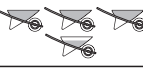
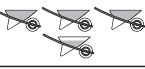

### Low-strength concrete 15 MPa

Suitable for unreinforced foundations for single storey houses and free-standing walls. 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	5½ Buckets





#### Batching by wheelbarrow

All Purpose Cement	Coarse Sand	Stone	Approximate Yield
			
2 Bags (1 = 50 kg)	3½ Wheelbarrows	3½ Wheelbarrows	0,35 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. 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

### High-strength concrete 30 MPa


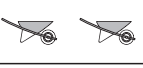
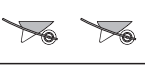

Suitable for suspended structural beams and slabs, precast items such as flagstones and heavy-duty floors such as work-shop floors. 1 part All Purpose Cement + 2 parts coarse sand + 2 parts stone. Allow an additional 10% of required quantities for wastage.

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

#### Batching by bucket

All Purpose Cement	Coarse Sand	Stone	Approximate Yield
			
1 Bucket	2 Buckets	2 Buckets	3½ Buckets

#### Batching by wheelbarrow




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

## Mixes for mortar

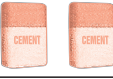
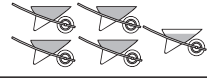

### Mix A

Exterior/Exposed to dampness.

#### Batching by bucket

All Purpose Cement	Building Sand	Approximate Yield
		
1 Bucket	4½ Buckets	3½ Buckets

#### Batching by wheelbarrow

All Purpose Cement	Coarse Sand	Approximate Yield
		
2 Bags (50 kg)	4½ Wheelbarrows	0,24 m³




### Quantities of popular sizes of masonry units and corresponding mortar requirements

Masonry unit type	Masonry unit size (mm)			Masonry units per m² (single leaf wall)
	Length	Width	Height	
Standard brick	222	106	73	52
Maxi block	290	140	90	34
Common blocks	390	90	190	13
	390	140	190	13
	390	190	190	13


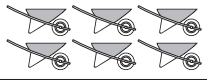

### Mix B

Interior/Dry.

#### Batching by bucket

All Purpose Cement	Building Sand	Approximate Yield
		
1 Bucket	6 Buckets	4½ Buckets

#### Batching by wheelbarrow

All Purpose Cement	Coarse Sand	Approximate Yield
		
2 Bags (50 kg)	6 Wheelbarrows	0,3 m³

### 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 a number 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.


#### Batching by bucket

All Purpose Cement	Building Sand	Approximate Yield
		
1 Bucket	4½ Buckets	3½ Buckets

#### Batching by wheelbarrow

All Purpose Cement	Coarse Sand	Approximate Yield
		
2 Bags (50 kg)	4½ Wheelbarrows	0,24 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




### Mix B

Interior/Dry.


#### Batching by bucket

All Purpose Cement	Building Sand	Approximate Yield
		
1 Bucket	6 Buckets	4½ Buckets

#### Batching by wheelbarrow

All Purpose Cement	Coarse Sand	Approximate Yield
		
2 Bags (50 kg)	6 Wheelbarrows	0,3 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

## Notes

- Sand, stone and water should be clean.
- Add only enough water to make the mix workable. Too much water weakens the mix.
- Mix until the entire dry mix is the same colour before adding water.
- Stone for concrete should be between 19 and 26 mm in size. For 13,2 mm or 9,5 mm stone, reduce the proportion of stone in the mix by 25%.
- Wheelbarrows used in the illustrations are builders' wheelbarrows with a 65 litre capacity.
- Concrete strengths for the mixes specified may vary  $\pm 5$  MPa at an age of 28 days.
- Special care should be taken when placing thin sections.

### Retempering

All mixes should be used up within a maximum of two hours being mixed and must **never** be retempered by mixing in additional water, as this reduces the resultant 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, damp sand or hessian and to keep it moist for a minimum of 7 days.

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