

Your guide to the use of All Purpose Cement

Cement products



Guide to the use of All Purpose Cement

Mixes for concrete

Low-strength concrete

15 MPa

Suitable for unreinforced foundations for single storey houses and free-standing walls. 1 part AfriSam 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 AfriSam All Purpose Cement + 0,65 cubic metres of coarse sand + 0,65 cubic metres stone. Allow an additional 10% of required quantities for wastage.



Medium-strength concrete

25 MPa

Suitable for reinforced foundations and slabs, light-duty house floors, paths, patios, steps, driveways and garage floors. 1 part AfriSam 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 AfriSam All Purpose Cement + 0,63 cubic metres of coarse sand + 0,63 cubic metres stone. Allow an additional 10% of required quantities for wastage.





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 AfriSam 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 AfriSam All Purpose Cement + 0,6 cubic metres of coarse sand + 0,6 cubic metres stone. Allow an additional 10% of required quantities for wastage.

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





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





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



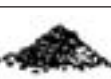

Batching by bucket

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





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

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


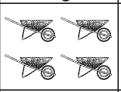

Class I - Mortar

Highly stressed masonry incorporating high strength structural units as used in multi-storey loadbearing buildings and walls exposed to severe dampness.




Batching by bucket

All Purpose Cement	Building sand	Approximate yield
		
1 Bucket	4 Buckets	3 ² / ₃ Buckets

Batching by wheelbarrow

All Purpose Cement	Building sand	Approximate yield
		
2 Bags (1 = 50kg)	4 Wheelbarrows	0,22 m ³




Quantities per m³ of mortar

All Purpose Cement	Building sand	Approximate yield
		
9,23 Bags (1 = 50kg)	1,20 m ³	1 m ³


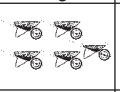

Class II - Mortar Mix A

Exterior/ Exposed to dampness.




Batching by bucket

All Purpose Cement	Building sand	Approximate yield
		
1 Bucket	4 ¹ / ₂ Buckets	3 ² / ₃ Buckets

Batching by wheelbarrow

All Purpose Cement	Building sand	Approximate yield
		
2 Bags (1 = 50kg)	4 ¹ / ₂ Wheelbarrows	0,24 m ³




Quantities per m³ of mortar

All Purpose Cement	Building sand	Approximate yield
		
8,33 Bags (1 = 50kg)	1,22 m ³	1 m ³


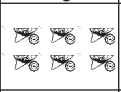

Class II - Mix B

Interior/ Dry.




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)	6 Wheelbarrows	0,3 m ³

Quantities per m³ of mortar

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

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 m ² (single leaf wall)	Mortar required in m ³	
	Length	Width	Height		Per 1000 units	Per 100 m ² 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	90	190	13	0,53	0,69
	390	140	190	13	0,83	1,08
	390	190	190	13	1,12	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	90	190	3,5	0,7
	390	140	190	5,5	1,1
	390	190	190	7,4	1,4

Notes

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


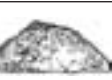
Batching by bucket

All Purpose Cement	Plaster sand	Approximate yield
		
1 Bucket	4½ Buckets	3¾ 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


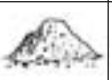

Batching by bucket

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



Retempering
All mixes should be used up within a maximum of two hours after 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.



AfriSam All Purpose Cement

A masterpiece of cement engineering

AfriSam All Purpose Cement is the result of careful research and development by our cement technicians. It is a specially blended, high quality cement engineered for use in all structural, building and masonry applications. It is perfect for reducing the heat of hydration in mass concrete and for improving concrete's resistance to chemical attack including sulphate, chloride and soft water. It makes concrete highly resistant to alkali-aggregate reaction and is often used to reduce the permeability of concrete in water retaining structures. AfriSam All Purpose Cement is extremely easy to work with and produces consistently excellent results every time. This consistent quality, versatility and proven strength make it the choice for builders, architects, engineers, contractors and DIY enthusiasts.

AfriSam quality guaranteed

AfriSam stakes its reputation on the consistency of our high-quality products and AfriSam All Purpose Cement is no exception. AfriSam's manufacturing facilities are ISO 9001 certified and boast the highest possible Quality Management Systems. AfriSam All Purpose Cement fully complies with the SANS 50197 cement specification for common cements. The composition of the cement is constantly monitored and maintained to guarantee high quality performance in the 32,5 N MPa strength class.

Performance

AfriSam All Purpose Cement produces durable concrete, mortar and plaster that will remain strong and stable for years. It can be successfully used in any application where high early strengths are not of primary importance. Its long term strengths are consistent with cements in the 32,5 N MPa strength class.

The choice for every job

AfriSam All Purpose Cement offers consistent strength, workability and durability, making it ideal for brick and block making, reservoirs and swimming pools, precast operations, road stabilisation, mining applications, structural concrete, plaster and mortar as well as shotcrete. AfriSam All Purpose Cement is not recommended for further on-site blending with components such as ground granulated blast furnace slag or fly ash, or where high early strength is required for early stripping of formwork and prop removal.

Storage

The best way to store your AfriSam All Purpose Cement is in a dry enclosed area, off the floor on a wooden pallet or on plastic sheeting. This will ensure that the bag does not absorb moisture from the floor. Doors and windows should be kept closed to eliminate air flow.

Availability

It is also available at reputable builders' merchants in the areas where AfriSam distributes this product. Please contact AfriSam Customer Service for the location of your nearest AfriSam Cement stockist.

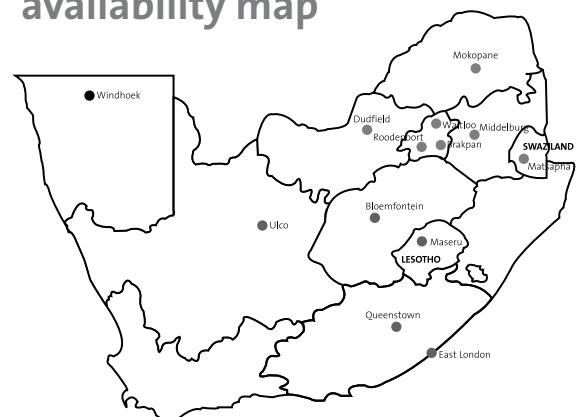
Health and Safety

Occupational exposure limits to cement are recommended in the Occupational Health and Safety Act. In terms of the time weighted average occupational exposure limit, the recommended limit for total inhalable dust is 10 mg/m³, and the respirable recommended limit is 5 mg/m³. Direct skin contact for extended periods can result in severe burns. It is therefore recommended that suitable attire be worn to prevent dust inhalation and direct skin contact. A detailed 'Safety Data Sheet' and 'Guide to the safe use of cement and concrete' is available on request.

Client support

Behind every bag of AfriSam All Purpose Cement is AfriSam's unique and highly developed sales support, technical service and supply infrastructure. The purpose of this infrastructure is to ensure that each of our clients can rest assured that every bag is perfect in terms of its quality and consistency. AfriSam also operates a fully equipped laboratory run by qualified and experienced technicians, ready and able to assist with specific requirements. A range of guide brochures for different cement applications are available from stockists of AfriSam Cement or AfriSam sales outlets.

All Purpose Cement availability map



All Purpose Cement is available from these facilities

Please note that while every care is taken to ensure the correctness of any advice or information given, AfriSam and our employees incur no liability with regard to the correctness thereof.





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