

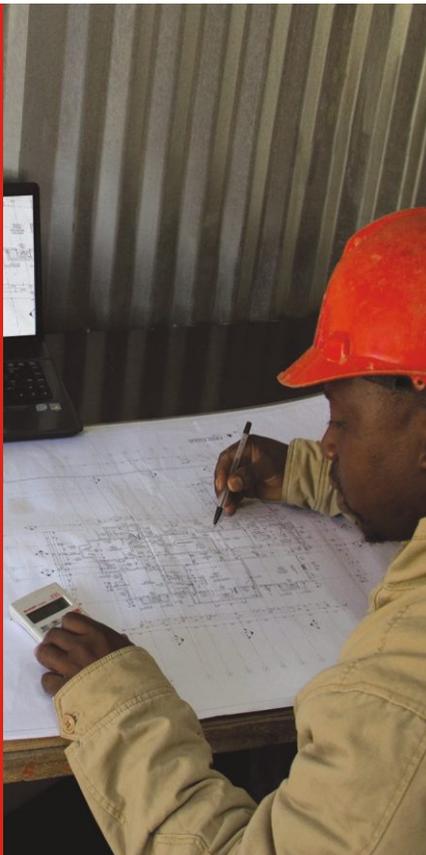
the sure way to estimate quantities



**PPC
CEMENT**



SUREBUILD



PPC Cement for best results

To ensure that your mix will produce best results, you need to use a power packed cement like **PPC Cement** with extra strength. Because it has extra strength it makes 15% more concrete than other regular general purpose cements. So you will achieve more for less.*

PPC Cement products

PPC SureBuild CEM II 42.5 N - General purpose cement for building and civil engineering work. **PPC Surebuild Cement 42,5 N** with extra strength, gives you 15% more concrete than regular 32,5 general purpose cements.



PPC OPC CEM I 52.5 N - For use in structural concrete and readymixed concrete and where high early strength is needed. **PPC OPC Cement 52,5 N** with extra strength gives 15% more yield than regular cements.



Batching and mixing materials

- 1 bag of cement has a volume of 33 litres.
- 1 builders wheelbarrow has a volume of 65 litres which is equivalent to TWO bags of cement.
- Do not split bags when batching except for small or unimportant work.
- Use a concrete mixer or hand mix on a dry, clean, non-absorbent surface.
- When mixing concrete by hand, first mix the cement, sand and water thoroughly and mix in the stone last - this saves a lot of effort.
- Mix until colour and workability are uniform.

*For more details on comparative mixes, see the Affordable Housing brochure.

Mortar quantities of masonry*

1 Cement (2 bags)

6 x Sand (390 litres)

This is enough to lay:

- 600 bricks or maxi-bricks in a cavity or single-leaf wall
- 500 bricks or maxi-bricks in a solid double-leaf wall
- 600 blocks (390x190x90)
- 400 blocks (390x190x140)
- 300 blocks (390x190x190)

Plaster quantities*

1 Cement (2 bags)

6 x Sand (390 litres)

This is enough plaster to cover approximately 20m² at a thickness of 15-mm, depending on wastage.

- Do not allow plaster to dry out too quickly
- Use up your mortar and plaster within 2 hours of mixing
- You may need builder's lime in your mortar and plaster as well if your sand lacks fine material. Use one 25kg bag of lime per bag of cement
- Do not mix gypsum plaster (e.g. Crestestone) with Cement plaster

Floor screed quantities*

1 Cement (2 bags)

3 x Sand (200 litres)

Note:

- Sand-cement screeds are for light duty only - they are not suitable for use in workshops or factories
- Screed mixes should be mixed to a plastic consistency The use of very dry screed mixes is a common cause of failure.

*NHBC guidelines

the sure way to estimate quantities



PPC Surebuild Cement 42,5 N concrete mixes

Low strength concrete (10-15 MPa)

1 Cement (2 bags)	4 x Sand (260 litres)	4 x Stone (260 litres)	Water 60-65 litres
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For 1m³ you need 5,0 bags of cement, 0,70m³ sand and 0,70m³ stone

Medium strength concrete (20-29 MPa)

1 Cement (2 bags)	3 x Sand (200 litres)	3 x Stone (200 litres)	Water 55-60 litres
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For 1m³ you need 6,4 bags of cement, 0,70m³ sand and 0,70m³ stone

High strength concrete (30-35 MPa)

1 Cement (2 bags)	2,5 x Sand (165 litres)	2,5 x Stone (165 litres)	Water 46-50 litres
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For 1m³ you need 7,5 bags of cement, 0,70m³ sand and 0,70m³ stone

PPC OPC Cement 52,5 N concrete mixes

Low strength concrete (10-15 MPa)

1 Cement (2 bags)	5 x Sand (325 litres)	5 x Stone (325 litres)	Water 65-70 litres
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For 1m³ you need 4,0 bags of cement, 0,70m³ sand and 0,70m³ stone

Medium Strength concrete (20-29 MPa)

1 Cement (2 bags)	4 x Sand (260 litres)	4 x Stone (260 litres)	Water 55-60 litres
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For 1m³ you need 5,0 bags of cement, 0,70m³ sand and 0,70m³ stone

High strength concrete (30-35 MPa)

1 Cement (2 bags)	3 x Sand (200 litres)	3 x Stone (200 litres)	Water 50-55 litres
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For 1m³ you need 6,4 bags of cement, 0,70m³ sand and 0,70m³ stone

Transporting, placing and compaction

- Concrete must be transported from the mixer in such a way as to avoid contamination, loss of paste and segregation.
- Concrete should be placed as near as possible to its final resting place.
- Concrete must be compacted to remove entrapped air which weakens the concrete.
- Concrete may be compacted using hand tools or with mechanical vibrators.

Curing of concrete

- Concrete gains strength over a period of time by means of chemical reactions between the cement and the mixing water called "hydration".
- If the concrete is allowed to dry out, hydration will stop and the concrete will not reach its potential strength.
- Curing concrete means to protect it from drying out and is best done by keeping the concrete wet for as long as possible. In practise the first three days of wet curing are the most important.

Storage of bagged cement

- Cement should be stored in a weather proof shed or container.
- It should be closely packed, away from doors and windows.
- It should be packed off the floor on plastic.
- It should be covered with a plastic sheet or tarpaulin.
- It should be stored so as to ensure "first in - first out" use.

Safety

- Do not stack bags more than 12 high.
- Do not stack more than two pallets high.
- Pick up bags correctly to avoid injury.
- Avoid contact with eyes, skin and clothing as cement and cement paste are highly alkaline and chemical burns may result.

Handy contacts

Company	Telephone	website
PPC Cement helpline PPC Cement (head office)	0800 023 470 011 386 9000	www.ppc.co.za
PPC Cement sales offices:		
Gauteng	011 626 3150	
Cape Town	021 550 2100	
Port Elizabeth	041 486 2272	
George	044 871 3024	
Nelspruit	013 741 4140	
Polokwane	015 297 2503	
Rustenberg	014 547 0100	
Pietermaritzburg	033 386 6171	
PPC Botswana (Gaborone)	00 267 390 1553	
PPC Zimbabwe (Bulawayo)	00 263 979 241	
Cement and Concrete institute	011 315 0300	www.cnci.org.za



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Visit our website at: <http://www.ppc.co.za>

For more advice on cement please ask your PPC Cement stockist or call the PPC toll-free help line 0800 023 470 (SA only).

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