

# BuildCrete

GENERAL PURPOSE CEMENT • 42,5N

Versatile cement offering higher strength and better all-round performance



[Technical data sheet](#)

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## Composition

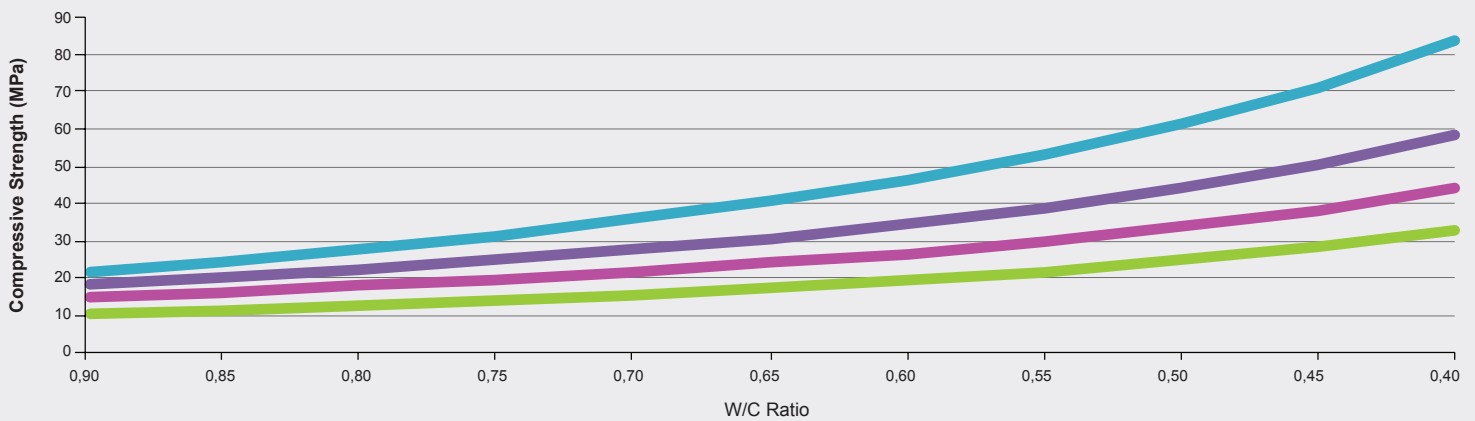
- Buildcrete is formulated at the various sites to optimise use of available materials:
- Portland-composite cement CEM II/B-M (V-L) 42,5N at Lichtenburg (LIC)
- Pozzolanic cement CEM IV/A-V 42,5N and CEM IV/B-V 42,5N at Randfontein (RAN)
- The product is available in 50 kg bags, bulk bags and bulk

## Strength performance

Buildcrete is a versatile general purpose cement offering higher strength and better all-round performance than standard general purpose products.

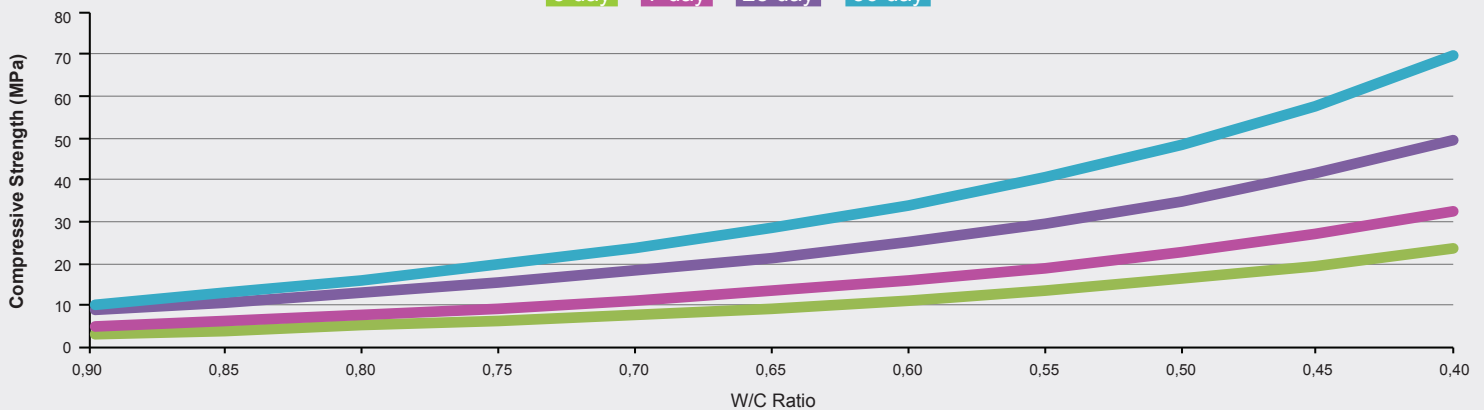
### BUILDCRETE LIC

3 day 7 day 28 day 56 day



### BUILDCRETE RAN

3 day 7 day 28 day 56 day



Disclaimer: These performance curves are provided in good faith and are intended as a helpful guideline for users of our cement products. The data was generated under ideal controlled conditions using standard laboratory materials and a general PCE plasticizer. Testing under different conditions outside our control may not reproduce exactly the same results.

## Quality

Buildcrete complies with the chemical and physical requirements of SANS 50197-1 (EN 197-1). The Buildcrete bag also displays the following locally regulated quality symbols:

- LOA number
- SABS mark
- e-Mark

## Physical properties\*

Property	LIC	RAN	SANS 50197-1 (EN 197-1) requirement
2 day compressive strength	15,0 MPa	15,0 MPa	≥ 10,0 MPa
28 day compressive strength	48,0 MPa	46,0 MPa	≥ 42,5 MPa
Initial set	220 min	240 min	≥ 75 min
Soundness	1,0 mm	1,0 mm	≤ 10 mm

## Chemical properties\*

Property	LIC	RAN	SANS 50197-1 (EN 197-1) requirement
SO <sub>3</sub>	2,56% m/m	2,56% m/m	≤ 3,5% m/m
Cl <sup>-</sup>	0,03% m/m	0,03% m/m	≤ 0,10% m/m
Na <sub>2</sub> O Equivalent	0,52% m/m	0,63% m/m	-
Na <sub>2</sub> O Equivalent Clinker	0,37% m/m		-

## Special properties\*

Property	LIC	RAN	SANS 50197-1 (EN 197-1) requirement
HOH - Heat of Hydration	200 J/g	175 J/g	< 270 J/g at 41 h (as per EN 196-9)

\*Typical test results

## Special characteristics

### Freshly mixed concrete:

- Better workability for easier handling, placing and finishing
- Good early strength gain, saving time and money
- More stable mixes that keep coarse aggregates uniformly dispersed
- Improved water retention and less bleeding for better surface finish
- Helps construction as concrete is easier to place with less effort

### Concrete in hardened state:

- Better finishes for floor slabs and off-shutter work
- Higher long-term strength and durability plus early aged strength
- Denser concrete with good impermeability

### Mortar and plaster:

- Easier mixing
- More workable 'buttery' mixes
- Easier laying
- Stable structural units achieved earlier





## Applications

The user-friendly, all-round performance characteristics of Buildcrete 42,5N offer a range of extra benefits for concrete and mortar work, making it an ideal choice for major project work as well as DIY enthusiasts and small contractors.

## Technical support

- Buildcrete is fully supported by the unique technical and laboratory resources of the Integrated Solutions and Innovation Centre (ISIC). ISIC operates one of the largest and most respected SANAS accredited Civil Engineering testing facilities in South Africa.
- Complying with ISO/IEC 17025, the ISIC facility has a proud record of continuous accreditation since 1996.

## Safety

Before starting any job, make safety the first step in your planning. Safety datasheets are available from:

- Integrated Solutions and Innovation Centre (ISIC) on 011 226 3600
- Website: [www.afrimat.co.za](http://www.afrimat.co.za)

## Storage & handling

- Stored cement must not be exposed to moisture
- Preferably store bags in a shed on plastic sheeting or pallets
- Only stack pallets two high - three is unstable and unsafe
- Close windows and doors to prevent damp air blowing over the bags
- Make tidy stacks with wide aisles to avoid damage by forklifts
- If stored outside, stack loose bags on pallets or timber slats under plastic sheeting
- Make a ridge with the sheeting so that rain runs off
- Cement deteriorates with time, therefore plan your stacks so that the first-in bags can conveniently be the first out (FIFO)
- When lifting bags of cement, keep a straight back and bend at the knees
- Handle bags carefully to avoid tearing the plastic

## Ordering

Place orders for Buildcrete via:

- Cement Call Centre on 011 657 1122
- Your local Sales Representative

## For further information on Buildcrete

- Please speak to your local Sales Representative
- Cement Call Centre on 011 657 1122
- For technical queries, please contact ISIC on 011 226 3600

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