

# Product Brochure



**CIMERWA 42.5 (CEM II A-P)**  
Premium Cement

## 1. CHARACTERISTICS

CIMERWA 42.5 is an advanced formulation cement with applications ranging from domestic mortar and concrete to large building projects. CIMERWA 42.5 is your proudly Rwandan, premium cement intended for use in masonry, structural concrete and precast concrete products.

## 2. FRESH STATE ADVANTAGES

- Improved workability
- Improved water retention
- Increased cohesion
- Reduced water requirement

## 3. HARDENED STATE ADVANTAGES

- Lower permeability of hardened cement
- Improved resistance to aggressive agents like chlorides and sulfates
- Improved long and short-term strength development

## 4. PRODUCT BENEFITS

- Product of choice for structural concrete, precast as well as home and DIY building applications.
- Consistent, convenient & cost-effective
- Improved workability and finishing

## 5. TECHNICAL SUPPORT

- CIMERWA continually strives to deliver First class technical service to the building and construction market by ensuring that the products and services we offer add value to our customers.

## 6. APPLICATIONS

CIMERWA 42.5 is a premium cement made from high quality raw materials with an appropriate amount of extender.

Typical applications include:

- Structural concrete
- Concrete paving
- Manufacture of precast products
- Mortars and plasters
- Floor screeds
- Grouts
- Shotcrete

## 7. THE CIMERWA 42.5 WAY TO MAKE CONCRETE

### 7.1 The way to make strong concrete

Making concrete is easy. There are many small concrete projects that you as a homeowner can confidently tackle using CIMERWA 42.5. Foundations, floor slabs, fish ponds and driveways are easy and by doing it yourself you can save money. The way to make strong concrete is to use CIMERWA 42.5 cement and never use too much water.

### 7.2 What materials do I need to make concrete?

- The CIMERWA 42.5 is ideal for concrete.
- Ask your supplier for clean concrete sand, and either 13mm or 19mm stone.
- Clean Water - If you can drink it, it is suitable for concrete. Add only enough water to obtain a workable mix. Too much water will weaken the concrete.



## GUIDE TO CONCRETE MIXES

	CEMENT	DAMP RIVER SAND	STONE
LOW STRENGTH: Foundations (10-15mpa)	1 X	10 X	10 X
	1 X	3.5 X	3.5 X
MEDIUM STRENGTH: Floors and Driveways (20-25mpa)	1 X	9 X	9 X
	1 X	3 X	3 X
HIGH STRENGTH: Structural Concrete (30-35mpa)	1 X	6 X	6 X
	1 X	2 X	2 X
FLOOR SCREEDS (25-30mpa)	1 X	9 X	
	1 X	3 X	

#### Successful Concrete

- Too much water in any mix reduces strength.
- Compact concrete using a spade or rake to remove air.
- Cure the finished concrete by keeping it damp for as long as possible

**IMPORTANT NOTE:** While all the information on the back of the bag is supplied in good faith, no liability can be accepted by CIMERWA as actual use is beyond its control.

### 7.3 How much concrete will I need?

Concrete is always poured into a 'form' or hollow in the ground. To work out how much concrete you need you first need to measure the space you are going to fill.

#### Flat slabs/Foundations/driveways:

Measure the length, width and depth of the section and multiply these together to work out how many cubic meters (m<sup>3</sup>) of concrete you need, e.g. length: 4.5m, width: 4m and depth: 0.1m = 1.8m<sup>3</sup>:

$$\begin{aligned} \text{Volume} &= (4.5 \times 4.0 \times 0.1) \\ &= 1.8 \text{ m}^3 \end{aligned}$$

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## Post Holes (Cylindrical Forms):

Measure the diameter (width) and depth of the hole. Now multiply the diameter by the diameter then multiply this total by the depth and then by 0.8 to work out how many cubic meters (m<sup>3</sup>) of concrete are needed. E.g. Diameter 0.3m, Depth 0.5m (0.3 x 0.3 x 0.5 x 0.8) = 0.036m<sup>3</sup> per hole.

## 7.4 How do I mix concrete?



### Concrete Mixer

If you use a concrete mixer the batch size should suit the mixer. Underfilling the mixer wastes time, while overfilling results in spillage and poor mixing.

- Place the measured quantity of stone in the mixer.
- Add a little water to wet the stone.
- Add the measured quantity of CIMERWA 42.5 cement.
- Add the measured quantity of sand.
- Finally add water, a little at a time, until the concrete is flowable but not too wet.
- Mix until uniform in colour and workability.

**REMEMBER:** Too much water will reduce the final strength of your concrete.

## How do I place concrete?

- Concrete should be placed within 1 hour of mixing.
- Place the concrete as close to its final position as possible.
- If the concrete is being placed on the ground, make sure the ground is dampened with a spray of water before placing the concrete.
- Once placed, spread the concrete evenly with a rake or a spade.
- The concrete should be well compacted or 'tamped' with a rod or spade, making sure that all air is removed and the concrete fills the form or hole completely.
- To create flat surfaces (for slabs or driveways) use a straight edge tool. First use a "chopping" motion to compact and level the surface, followed by a "sawing" motion to strike off the excess concrete.
- Concrete slabs or driveways should be divided into panels to limit cracking. Joints should be no more than 2.5 m apart for 80 mm thick slabs and 3.0 m apart for 100 mm thick slabs.
- After placing the concrete, prevent evaporation by covering it with plastic sheeting. Once it has stiffened, remove the plastic sheeting to complete the final finishing.
- Once it has set, cure the concrete as discussed below.
- For driveways, keep vehicles off the concrete for at least 7 days.

## Curing of concrete

- Concrete gains strength over a period of time.
- For the concrete to develop its full strength and to reduce cracking, it must not be allowed to dry out.

- This can be done by keeping the concrete surface damp by covering it with damp hessian, damp sand or spraying it regularly with water.
- The curing process should be continued for at least 7 days.
- In practice the first three days of wet curing are the most important.

## 8. GENERAL HINTS AND TIPS

### 8.1 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 on plastic sheeting or pallets.
- It should be covered with a plastic sheet or tarpaulin.
- It should be stored so as to ensure "first in-first out" use.

### 8.2 Tips for using cement in an environmentally responsible manner

- Use the recommended mix proportions on the back of the bag.
- Use the correct strength mix to minimise waste.
- Do not add too much water - this will reduce the strength.
- Mix just enough concrete, mortar or plaster for your project.
- If you are building, make sure you design for optimal energy efficiency.
- Use good quality aggregates and potable water.
- Cure the concrete properly to reduce cracking and get maximum strength.
- Do not waste water when cleaning equipment or surroundings.
- Dispose of your paper bags in a responsible manner.
- Recycle building rubble where

possible.

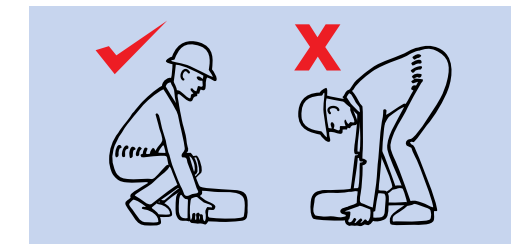
- Concrete is the preferred building material for energy-efficient and structurally durable structures.

## 8.3 Safety

### HEALTH AND SAFETY WARNING



- Do not stack more than 12 bags 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.

For More advice on Cement please contact the CIMERWA Sales Team:

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