



Baobab Cement Heavy Duty CEM II A-V 42.5N

General Information

Cementis Baobab Cement Heavy Duty is a CEM II/A-V 42.5N fly ash cement, conforming to the norm of EN 197-1:2011, having cement content (80% - 94 %) and fly ash content (6% - 20%) . It can be used for all general application. The fly ash used (Type V) for the cement satisfies the requirement of EN 450-1 and falls under the Class F as per ASTM C 618 constraints.

Advantages

- Lower heat of hydration compared to CEM I 42.5N, thus reducing the risks of thermal cracking and consequent reduction of mechanical properties in concrete.
- Improved workability and cohesion of concrete by reducing segregation.
- Decrease bleeding which contributes to durability of the concrete.
- Enhanced resistance to chloride ingress as it decreases permeability.
- Enhanced durability and strength in the long term.
- Due to its spherical shape, fly ash improves pumpability.
- More resistant to sulfate ions as fly ash decreases the amount of C3A in the cement.

Application

- All concreting work such as slabs, beams, and columns.
- Mass concrete.
- Reinforced concrete wall.
- Foundation casting.

Physical and Mechanical Properties

Compressive strength test and setting times	Testing method	UOM	Typical average values obtained from Cementis Laboratory	EN 197-1 Norms
2 days	EN 196-1	MPa	23	$\geq 10\text{MPa}$
7 days	EN 196-1	MPa	37	-
28 days	EN 196-1	MPa	50	$\geq 42.5\text{MPa} \leq 62.5\text{MPa}$
Consistency	EN 196-3	%	29.8	
Initial Setting Time	EN 196-3	Min	160	$\geq 60\text{ min}$
Final Setting Time	EN 196-3	Min	215	
Soundness	EN 196-3	mm	1.0	$\leq 10\text{mm}$
Fineness	EN 196-6	m ² /kg	355	-

Chemical Test

Test	Testing method	UOM	Typical average values obtained from MSB and Cementis Laboratory	EN 197-1 Norms
Sulphate Content	EN 196-2	%	1.2	≤ 3.5%
Chloride Content	EN 196-2	%	0.01	≤ 0.10
Loss on Ignition	EN 196-2	%	2.1	
Heat of Hydration 41hr	EN 196-9	J/g	260	

Typical Mix Design for a Concrete of Grade 30MPa

Concrete	1 bag x 25 kg	54 kg of fine aggregates (Surface saturated dry)	56 kg of coarse aggregates (Surface saturated dry)	± 10 L of water
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Condition of Use

- Typical mix design is based on laboratory testing and local aggregates used. It is essential to use the correct materials, proportion and mix the materials properly, add the correct amount of water, and compact and cure as appropriate.
- Concrete mix design needs to be varied to suit individual circumstances. It is strongly recommended that trial mixes are carried out as per site engineer's instruction prior to commencement of work to ensure that the mix design and material combinations meet the requirements of the project.
- Cementis Heavy Duty Cement should not be mixed with other cement types.

Storage

Portland cement must be kept dry to retain its quality. Protect packaged cement from moisture and humidity. Do not stack cement bags directly on floor.

Safety

Prior to using or handling cement products, first read and understand the Safety Data Sheets (SDS) available upon request.

Availability of Products

- In bulk lorries delivered on site
- Cementis (Mauritius)Ltd (Chaussée Tromelin, Mer Rouge, Port Louis)
- Baobab Distribution Centre (Valentina, Phoenix)
- Baobab Distribution Centre (Bonair Triolet)
- Baobab Distribution Centre (Rose Belle)
- Baobab Distribution Centre (Constance)

Disclaimer

The above-mentioned values are averages obtained from testing and can only be considered as indicative. Cementis (Mauritius) Ltd only guarantees the limit enforced by the standards EN 197 -1. Laboratory Test Reports are available upon request.