PRODUCT DATA SHEET

ORDINARY PORTLAND CEMENT (OPC):

NAJMAT AL-SAMAWA
اسمنت نجمة السماوة

Our Ordinary Portland Cement (OPC) is used in all general constructions, especially in major and prestigious projects where cement is needed to meet stringent quality requirements. It can also be used in concrete mortars and grouts, etc. Ordinary Portland Cement is compatible/consumable with admixture/ retarders, etc.

COMPLIANCE WITH:

IQS-5-2019 CM I 42.5 R
SANS-EN-197-1-2013 CEM I 42.5 R
TS-EN-197-1-2012 CEM I 42.5 R
PS-232 2015 CEM I 42.5 R
BS EN-197-1-2011 CEM I 42.5 R

CEMENT PROPERTIES:

CHEMICAL COMPOSITION

CHEMICAL ANALYSIS	STANDARD LIMIT	TYPICAL VALUE
LOSS ON IGNITION %	≤ 4.0	≤ 4.0
INSOLUBLE RESIDUE %	≤ 1.5	≤ 1.0
SO3 %	≤ 2.5	≤ 2.5
CHLORIDE %	≤ 0.10	≤ 0.10

MECHANICAL & PHYSICAL REQUIREMENTS

PROPERTY	STANDARD LIMIT	TYPICAL VALUE
COMPRESSIV STRENGTH (28 DAYS) MPA	≥ 42.5 ≤62.5	≥ 42.5
SETTING TIME (MIN)	INITIAL ≥ 45	≥ 45
	FINAL ≤ 600	≤ 600
EXPANSION (MM)	≤ 10	≤ 1.0

ADVANTAGES:

- High Early & final Strength.
- Durable & sustainable.
- Suitable workability to be placed on form work, consolidated & satisfactory surface finish.
- Stable mix (avoiding of bleeding & segregation during transport & placing).
- Improve block makers, productivity by reducing de moulding time.

APPLICATION:

It is used in general purpose cement there is no special properties are required.

BUILDINGS	CIVIL	TRANSPORT	WATER	AGRICULTURE
FLOORS	PIERS	ROADS	PIPES	BUILDINGS
BEAMS	BLOCKS	PATHWAYS	DRAINS	PROCESSING
COLUM'S	RETAINING WALLS	CROSSING	CANALS	PIPES
ROOFING	SILOS	BRIDGES	DAMS	IRRIGATION
PILES	WARE HOUSING	VIADUCTS	TANKS	
BRICKS	POLES	TUNNELS	POOLS	
MORTAR	PYLONS	PARKING		
PANELS	FENCING			
PLASTER				

DELIVERY:

Najmat Al Samawa OPC cement is supplied both in Bags as well as in Bulk.

GENERAL RECOMMENDATION:

WATER:

Keep water to cement ratio (W/C) low, As the W/C decreases the distance between the cement particles in the paste decreases. The smaller the inter particle spacing, the faster the cement hydration products can fill these spaces, & stronger the links between particles created by these hydration products. As a result, the porosity of the paste decreases & the concrete becomes more impermeable.

Make sure to use normal water (odorless, colorless, no turbidly etc.) for mixing & curing.

CURING:

For proper hydration curing is important. Concrete or plaster should be cured at least for seven days. As temperature rise lead to drying shrinkage, which lead to cracking. Strength increases with proper curing, due to hydration & less evaporation.

MIXING:

It is better to mix the constituents in a fully automatic batching plant. For non -automated concrete production (hand mixing) accurate measurements of all ingredients with a suitable container (wheel barrow or bucket) at least for 3 to 5 minutes.

STORAGE:

Maximum number of bags stored should be 10.

Bags should be placed at least one foot above the ground & side walls.

Bulk cement should be stored in damp proof silos.

HEALTH & SAFETY:

Cement & Concrete may cause Skin burn & ulceration due to alkaline nature of mix.

The eyes are particularly vulnerable with increasing contact time.

Seek medical advice without any delay.

In case of skin contact wash the skin with soap & water, if irritation persist seek medical advice without any delay.

Use proper PPE, s for concrete (glassed, gloves etc.).