

PRODUCT DATA SHEET

SULPHATE RESISTANT CEMENT (SRC):



NAJMAT AL-SAMAWA
اسمنت نجمة السماوة



Our Sulphate Resistant Cement (SRC) cement is designed to improve the performance of concrete where the risk of sulphate attack may be present. It also provides improved durability for concrete in most aggressive environments, reducing the risk of deterioration of the structure.

COMPLIANCE WITH:

IQS-5-2019 CEMI 42.5 R-SR3.5
SANS-EN-1971-2013 CEM I 42.5 R-SR5
TS-EN-197-1-2012 CEM I CEMI 42.5 R-SR5
PS-232-2015 CEMI SRC SR- 5
BS EN-197-1-2011 42.5 R SR 5

CEMENT PROPERTIES:

CHEMICAL COMPOSITION

CHEMICAL ANALYSIS	STANDARD LIMIT	TYPICAL VALUE
LOSS ON IGNITION%	≤ 4.0	≤ 4.0
INSOLUBLE RESIDUE %	≤ 1.5	≤ 1.0
SO ₃ %	≤ 2.5	≤ 2.50
C3A	≤ 3.5	≤ 3.50
CHLORIDE %	≤ 0.10	≤ 0.10

MECHANICAL & PHYSICAL REQUIREMENTS

PROPERTY	STANDARD LIMIT	TYPICAL VALUE
COMPRESSIVE STRENGTH(28 DAYS) MPA	≥42.5 ≤62.5	≥ 42.5
SETTING TIME (MIN)	INITIAL ≥ 45	≥ 45
	FINAL ≤ 600	≤ 600

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 places where concrete is exposed to severe sulphate attack. It is strongly recommended for underground & basement structures.

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



DELIVERY:

Najmat Al Samawa SRC 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 (glasses, gloves etc.).