





Bengal Cement Ltd.
Head Office: Bengal House, 75 Gulshan Avenue, Dhaka 1212
Corporate Office: Richmond Concord, Level 7, 68 Gulshan Avenue, Dhaka 1212
Factory: Baradi, Sonargaon, Narayanganj. Phone: +880 9609009020
www.bengalcement.com.bd













Message from the Honorable

CHAIRMAN

We started our journey back in 1969 by establishing country's first plastic processing company – Bengal Plastics Ltd. Today, Bengal Group is one of the largest plastic industries in Bangladesh. However, our activities are not limited to plastics these days. Over the years we have successfully diversified our businesses into electronic media, real estate, food, chemical, paper, garments and renewable energy.

Our employees are the most important assets to the success of our business. Integrity, teamwork, and accountability are the core values, on which we've built our foundation. Superior product quality, strong commitment to our customers, and timely delivery have contributed to the success of our growth.

2012 was a very exciting year for us as that year we've taken two of our companies to public. On April, 2013 we have successfully listed our company, Bengal Windsor Thermoplastics Ltd. on both Dhaka and Chittagong Stock Exchanges. Bengal group of industries will launch Bengal Cement Ltd. to contribute in fastest growing cement sector and economic growth of Bangladesh.

Initially Bengal Cement Ltd. will produce 4000 MT per day cement by state-of-the-art German technology and within a very short time the production capacity will expand to 8000 MT per day. Bengal Cement plant situated at Baradi, Narayangonj under Dhaka division. The plant is only 35 KM away from Dhaka city beside the river Meghna.

The cement industry is a very energy intensive industry. That's why Bengal Cement introducing less emission and green environment technology to their recent cement plant. It would be the state of art technology which will bring green technology and energy efficient technology all together, to produce high quality and International standard cement for heavy construction work as well as general consumers all over the country around Bangladesh. Bengal Cement Ltd. giving priority in produce quality cement blended through innovative processing, development of using technology which decreased dust to create environment friendly surroundings, research for increased efficiency of finished goods and overall development of cement manufacturing technology.

We will continue to focus on expanding our businesses in order to create more jobs to eliminate poverty in our society. We have also adopted effective CSR programs to make positive impacts on our community whilst maximizing business value of our stakeholders and shareholders.

Thank you-

malen,

Morshed Alam, MP Chairman Bengal Group of Industries



BENGAL CEMENT





BENGAL GROUP OF INDUSTRIES

A t a G L A N C E

Bengal Group of Industries started its journey in 1969 by establishing country's first plastic processing company 'Bengal Plastic Ltd'. Over the years, the company has successfully diversified business along with 32 sister concerns including electronic media, real estate, food, chemical, paper, garments and renewable energy. Integrity, teamwork and accountability are the core values of Bengal Group of Industries. Superior product quality, robust supply chain management and the strongest commitment to customers accelerated rapid growth of the company. To create more job opportunity as well as to contribute in present development of the nation, Bengal Group is continuing to focus on expanding its business in different sectors. It also adopted effective CSR programs to make positive impacts on the community whilst to maximize business value of the stakeholders.

To know more about Bengal Group of Industries, please visit: www.bengalgroup.com

CONCERNS OF BENGAL GROUP OF INDUSTRIES





w.bengalcement.com.bd 05 CEMENT Strength with durability 06



A B O U T

BENGAL CEMENT

To fulfill the rising (local and global) demand of cement and as an aim to contribute the growing infrastructure development by provide quality building materials, Bengal Group recently expanded its scope of service to cement industry. Hence, the group established a world-class factory with 1.4 Million MT yearly capacity; situated at Baradi, Narayanganj – around 35 kilometers from central Dhaka. With the tag line 'Strength with Durability', Bengal Cement is the last edition of the business of Bengal Group.

VISION

Bengal Cement aims to provide safe and reliable products & technologies. We strive to become a company who plays an indispensable role in building a reliable, affordable, sustainable infrastructure & also to be a role model of cement manufacturing company, benefiting all stakeholders and fulfilling community beliefs, global greenhouse conscious & corporate social responsibilities.

MISSION

Bengal Cement fortifies their purposes by furnishing with local communities and the nation through building. Ensuring a durable future for nation is the most aspiring job for us. Accomplishing indestructible buildings are the main stimulation for our contenders.

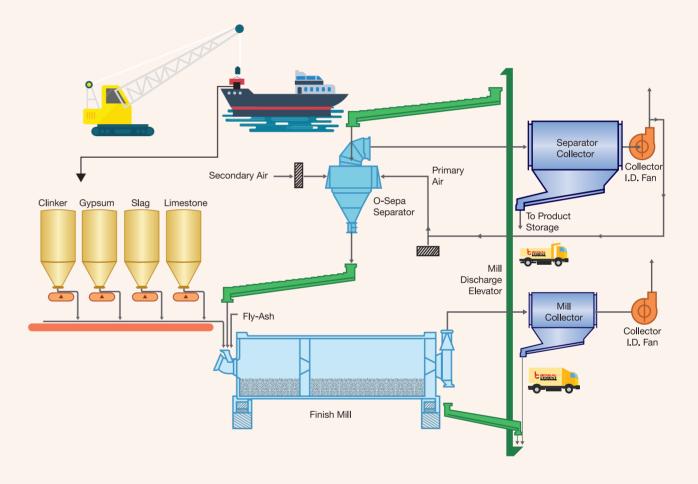


BENGAL CEMENT Strength with durability

CEMENT

MANUFACTURING PROCESS

Cement manufacturing is a complex process that begins with mining and then grinding raw materials that include limestone and clay, to a fine powder, called raw meal, which is then heated to a sintering temperature as high as 1450°C in a cement kiln. In this process, the chemical bonds of the raw materials are broken down and then they are recombined into new compounds. The result is called clinker, which are rounded nodules between 1mm and 25mm across. The clinker is ground to a fine powder in a cement mill and mixed with mineral components and gypsum to create cement. The powdered cement is then mixed with water and aggregates to form concrete that is used in construction.





engalcement.com.bd 07 CEMENT 08

STATE-OF-ART TECHNOLOGY

In this highly competitive market of Bangladesh, Bengal Cement has taken a bold step to penetrate with products which exceeds the industry started through superior quality. The challenge has been made possible by using the globally entrusted German PENGFEI Technology and the most advanced machineries. Using two highly sophisticated modern ball mill of producing Eighty Metric Ton cement per hour each, Bengal Cement factory is presently capable of producing 1.4 MT per year, which has made it one of the highest production capacity cement factories of this country. The Management has planned to expand its production capacity up to 2.0 million MT per year within two years.



Production Capacity: 1.4 Million MT/Year



IMPROVED RAW MATERIALS

Bengal Cement is committed with the durable strength. Thus, to produce best quality cement, we are using clinker, fly ash, slag, limestone and gypsum of world class quality as raw materials, directly imported from different corner of world. The imported raw materials are preserved in a weather protected place to maintain the intact quality. Apart from this, to ensure the standard and quality of the raw materials test certificate is obtained from the reputed international "Quality Assurance" firm like the SGS, the Lloyd before they are imported. The same are also tested in our own laboratory to confirm the standard and quality.

SOURCE OF RAW MATERIALS

Bengal Cement uses the world best clinker, fly ash, slag, gypsum and limestone from Indonesia, Vietnam, Japan and India.













To maintain the best quality, we have a decent and distinct storage system to store every items of raw material separately.

10



P R O D U C T PORTFOLIO

As per the demand of the customers for different types of infrastructure, Bengal Cement Industry is currently producing 3 different types of quality cement.

BENGAL CEMENT STANDARD

Portland Composite Cement (PCC)

PRODUCT INTRODUCTION

Bengal Cement Standard is a high strength and durable blended Cement produced with the combination of high-grade raw materials. It classified under the CEM II/B-M, 42.5 N complying with BDS EN 197-1: 2003.

TECHNICAL SPECIFICATION

BDS EN 197-1: 2003, CEM II/B-M (S-V-L), 42.5N

ASTM C-595

CLINKER : 65-79%
 SLAG, FLY ASH & LIMESTONE : 21-35%

◆ GYPSUM : 0-5%





BENGAL CEMENT Strength with durability

BENGAL CEMENT STANDARD TEST RESULT

Test	Age	Standard Requirements (ASTM C595)	Bengal Cement Standard	
Physical Parameters				
Compressive Strength (psi)	3 Days	1890	> 2600	
Compressive Strength (psi)	7 Days	2900	> 3600	
Compressive Strength (psi)	28 Days	3620	> 5200	
Setting Time (min)	-	160~180	340~370	
Fineness (m²/kg)	-	-	380~400	

Test	Age	Standard Requirements (BDS-EN Standard)	Bengal Cement Standard	
Physical Parameters				
Compressive Strength (Mpa)	2 Days	10	> 18	
Compressive Strength (Mpa)	7 Days	-	> 30	
Compressive Strength (Mpa)	28 Days	42.5	> 45	

Bengal Cement Standard is recommended for:

- ▶ General purpose concrete like slab, bridge-culvert, drainage so on
- High rise building structural elements such as concrete columns, walls, lift shafts and beams
- ▶ Mass concrete structures where heat of hydration effect is high
- ► Concrete structures exposed to seawater (harbor, jetty, building etc.)

Benefits of Bengal Cement Standard:

- ► Lower hydration heat
- ► Reduced permeability
- ▶ Improved workability/Enhanced pumpability
- Sustainable and environment friendly
- ► Increased resistance



Fig.: Strength Development

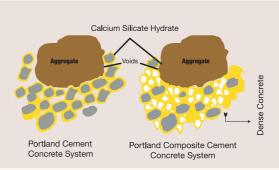


Fig.: Dense Concrete

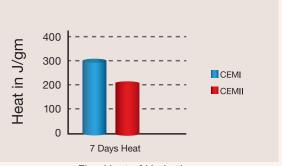


Fig.: Heat of Hydration



pengalcement.com.bd 11 CEMENT 12

PRODUCT **PORTFOLIO**

BENGAL CEMENT MAXIME

Portland Composite Cement (PCC)

PRODUCT INTRODUCTION

Bengal Cement Maxime is a type of Portland Composite Cement classified under the CEM II/A-M, 42.5N Comply with BDS EN 197-1: 2003 standard. Extra strong, high performance cement that offers a range of advantages. Bengal Cement Maxime gives significant cost benefits when compared with traditional cement.

TECHNICAL SPECIFICATION

BDS EN 197-1: 2003, CEM II/A-M (S-V-L), 42.5N

ASTM C-595

CLINKER : 80-94%
 SLAG, FLY ASH & LIMESTONE : 06-20%
 GYPSUM : 0-5%





BENGAL CEMENT MAXIME TEST RESULT

Test	Age	Standard Requirements (ASTM C595)	Bengal Cement Maxime	
Physical Parameters				
Compressive Strength (psi)	3 Days	1890	> 2900	
Compressive Strength (psi)	7 Days	2900	> 3900	
Compressive Strength (psi)	28 Days	3620	> 5500	
Setting Time (min)	-	150~170	340~360	
Fineness (m²/kg)	-	-	380~400	

Test	Age Standard Requirements (BDS-EN Standard)		Bengal Cement Maxime	
Physical Parameters				
Compressive Strength (Mpa)	2 Days	10	> 18	
Compressive Strength (Mpa)	7 Days	-	> 35	
Compressive Strength (Mpa)	28 Days	42.5	> 48	

Bengal Cement Maxime is recommended for:

- ► Concrete which needs to be pumped on to higher elevations and need long term slump retention
- ▶ Mass concrete structures where heat of hydration effect is high
- ▶ Dam blocks and under water structures where coastal effects are high
- Precast concrete application (Bridges, Flyover, Slab, Rigid Pavement so on)

Benefits of Bengal Cement Maxime:

- ► High strength for the same investment
- ► Optimized construction cycles
- ► Low admixture and cement consumption
- **▶** Economical
- ▶ Better casting and superior finish



CEMENT





14

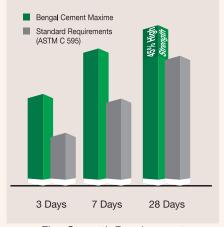


Fig.: Strength Development



PRODUCT PORTFOLIO

BENGAL CEMENT PRIME

Portland Cement (Equivalent to OPC)

PRODUCT INTRODUCTION

Bengal Cement Prime is a type of Portland Cement (PC) classified under the CEM I, 52.5N Comply with BDS EN 197-1: 2003 standard. This cement is also called Ordinary Portland Cement (OPC). Bengal Cement Prime is produced by using high quality, Grade 1 Low Alkali Clinker and Gypsum. This result concrete of highest strength, suitable for day-to-day applications, while reducing the amount of cement required for the job.

TECHNICAL SPECIFICATION

BDS EN 197-1: 2003, CEM I, 52.5N

ASTM C 150, Type I

CLINKER : 95-100%GYPSUM : 0-5%





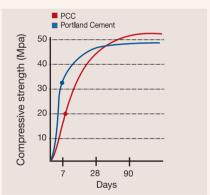
BENGAL CEMENT PRIME TEST RESULT

Test	Age	Standard Requirements (ASTM C150)	Bengal Cement Prime	
Physical Parameters				
Compressive Strength (psi)	3 Days	1740	> 3500	
Compressive Strength (psi)	7 Days	2760	> 5200	
Compressive Strength (psi)	28 Days	4060	> 6000	
Setting Time (min)	-	120~140	330~360	
Fineness (m²/kg)	-	Minimum 280	360~380	
Test	Age	Standard Requirements (BDS-EN Standard)	Bengal Cement Prime	
Physical Parameters				
Compressive Strength (Mpa)	2 Days	20	> 25	
Compressive Strength (Mpa)	7 Days	-	> 35	

28 Davs

Bengal Cement Prime is recommended for:

- ▶ Construction of concrete roads subjected to high wear and tear, with the need to deliver extended life spans
- Marine and water retaining structures where tougher concrete is needed to withstand severe exposure conditions, delivering extended life lengths
- ▶ Pre-Cast concrete to deliver high strength, superior finishes and crack free surfaces
- Precast concrete application (bridge girder, electric pole, beams, high strength precast elements etc.)
- Large Infrastructure projects that require high early strength (MRT, BRT, flyover so on)



> 55

52.5

Fig.: High Early Strength

Benefits of Bengal Cement Prime:

- Low alkali cement
- ▶ Durable & sound concrete

Compressive Strength (Mpa)

- ▶ High grade concrete
- ► High early strength
- ▶ Consistent quality

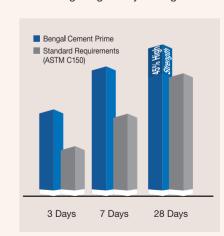


Fig.: Strength Development



w.bengalcement.com.bd 15 CEMENT
Strength with durability

16

QC POLICY & ASSURANCE

QUALITY CONTROL PLAN

Materials Name	Sampling Location	Sample Type	Sample Amount	Test Parameter	Test Frequency	Implementation by
	Control of incoming Material					
Limestone	Shed/truck/ barge		10Kg	Moisture with full chemical analysis by wet method		
Fly Ash	Storage/ barge		10Kg	Moisture with full chemical analysis by wet method		
Clinker	Shed/silo/ barge	Several	20 kg	Moisture with full chemical analysis by wet method	Each Consignment	Head of Quality (Quality Assurance)
Slag	Shed/truck/ barge	spot	10Kg	Moisture with full chemical analysis by wet method		, 1000, 4,1100,
Gypsum	Shed/truck/ barge		4 kg	CaO, SO3, LOI, IR & Moisture		
			Control of inc	coming Material		
Slag	CMWF	Grab	03 kg	Cao, SiO2, MgO	Monthly	Head of Quality (Quality Assurance)
Clinker	CMWF	Grab	10 kg	CaO, SiO2, MgO	Monthly	
Limestone	CMWF	Grab	03 kg	LOI, CaO	Monthly	
Fly Ash	CMWF	Grab	2 kg	Moisture, LOI, IR	Monthly	
Gypsum	CMWF	Grab	03 kg	SO3, Free Moisture, Purity	Monthly	
Grinding	CMWF	Composite 01K	01Ka	R-45, R-90, Blaine, Setting time	Hourly	
Cement	Olvivvi		Composite Tring	LOI, SO3, IR	Eight-hourly	
Control of incoming Material						
Dispatch	Grad/Spot 10 i	10 kg	R-45, R-90, Blaine, Strength (2D & 28D), NC, IST, Expansion	Daily	Head of Quality	
Cement S		io kg	LOI, IR, SO3, Cl & Lime	Daily	(Quality Assurance)	













RESULT



CUSTOMER











DISTRIBUTION **CHANNEL & LOGISTIC SERVICE**

To deliver cement around the country, Bengal Cement Limited has a highly developed distribution channel along with the earnest dealers across the country. For immediate fulfilling any kind of demand from anywhere of the country, the company maintains a robust supply-chain management towards the waterway and roadway both.



ROAD TRANSPORT

In Road Transport system, Bengal Cement has a strong logistic capacity including 150 tracks, adequate covered vans to supply cement swiftly against the immediate demand from wherever of country. Several bulk carriers are also counted in the distribution system; which is capable to deliver cement to large infrastructures.

WATERWAY

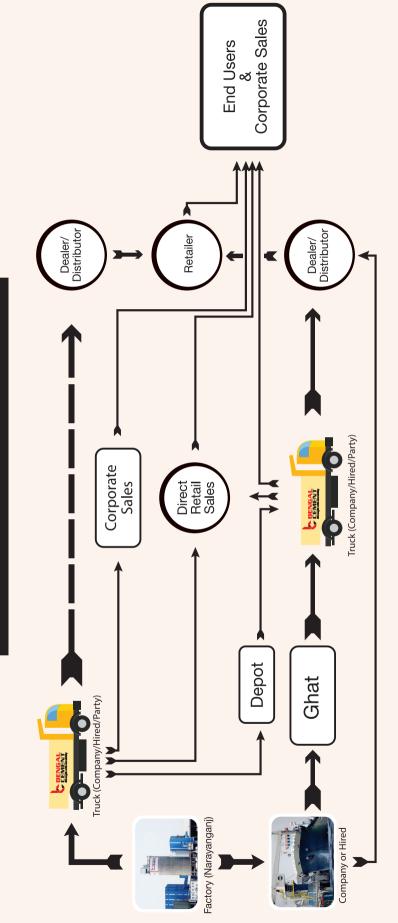
In waterway, Bengal Cement also has a well-built logistic capacity. It contains adequate lighter vessels and trawlers for supplying cement rapidly through the waterway.





DISTRIBUTION POINTS

For upholding proper and hassle-free distribution of the products within the desired time, Bengal Cement Limited has 7 additional distribution points (ghat) of its own around the country. Around 200 people are actively involved in the distribution system to ensure a smoother supply-chain management system. The company also has almost 500 sincere dealers and corporate clients around the country to fulfill the immediate demand.





19



UNIQUE FEATURES

GRADE-1 LOW ALKALI CLINKER HIGH EARLY GREEN **STRENGTH PRODUCT** BENGAL CEMENT **SUPERIOR** MOST **DURABLE** COHESION **CHEMICAL RESISTANT**

BUSINESS DEVELOPMENT

To create long-term value for the brand, Bengal Cement Limited always emphasize the development of the customers, dealers and associates of different level. So, the company regularly arranges different effective events with active participation of the stakeholders such as Mason Meet, Technical Seminar, House Owner's Workshop, Dealers & Retailers Conference etc.











.bengalcement.com.bd 23 CEMENT Strength with durability 24 www.beng

MOMENTUMS

Business development and generating profit are not the only prospect of Bengal Cement Limited. The business of the company is a priority; not the ultimate goal. And the company is committed to ensure sustainable development of the country, community and environment. So, it holds social welfare and corporate responsibility as an essential obligation. Thus, the Company drives a wide range of CSR activities in different areas like education supports to the underprivileged students, financial supports to disables, merit scholarships, emergency supports in natural disasters, inspiring & motivating practices of art, culture and sports etc.





















BENGALCEMENT 25 26