# Leca Blocks



شركة قطر للطابوق الأحمر QATAR CLAY BRICKS CO.

إهدى شركات الصناعات التحويلية Subsidary of QIMC

- Concrete Blocks For Walls
- Thermal Blocks For Walls
- Hordi For Ceiling
- Interlock Pavers
- Leca Blocks

- طابوق السمنتي للجدران
  - طابوق عازل للجدران
    - هوردي للأسقف
    - إنتر لوْك للأرضيات
    - طابوق خفيف الوزن







at QATAR CLAY BRICKS have fortified Co. ourselves with the successful establishment of our newly commissioned state-of-the art plant at Industrial Area, Qatar. The plant has been designed to produce premium quality paving stones in different colours and sizes to meet requirements. client our Given the opportunity, we are sure to ensure customer satisfaction with cost effectiveness, quality, after sales service and technical assistance.









### RAW MATERIALS

#### **GABBRO AGGREGATES**

Aggregates uesd are crushed gabbro aggregates complying with BS 882:1983, free from earth clay, loam and soft clay. Sampling and testing shall be in accordance with BS 812:1975. The amount of material passing as BS 75 micron sieve in the combined aggregates, when tested in accordance with BS 812 (wet sieving method), shall not exceed the following limits:

1) Fine aggregates: 3 per cent by weight.

2) Coase aggergates: 1 per cent by weight. We do not use limestone in our products.

#### WASHED SAND

The sand used for concrete shall be capable of passing through a 5mm Bs test sieve and it shall be so graded that when mixed with coarse aggregates and cement, it shall produce concrete of the maximum density. The fine aggregates shall not contain more than 25 per cent by weight of soluble calcium carbonate



in either the fraction passing a 600 micron BS sieve.

We are producing the quality products with 100 per cent washed sand and gabbro aggregates. The sand is processed at QCBC sister plant, QATAR SAND TREATMENT PLANT.

#### CEMENT

The cement used for manufacture of concrete paving blocks shall unless stated otherwise, be ordinary portland cement (TypeII). If sulphate-resisting cement should be used, it shall comply with BS 4027 standards for QATAR CLAY BRICKS CO. The cement content in the blocks shall not be less than 400Kg/cu.m concrete.







### RAW MATERIALS

#### PIGMENT

Coloured concrete paving blocks shall contain a minimum of 5 per cent inorganic by weight of the cement content and according to manufactures instructions. All pigments will comply with BS 1014 standards and have been tested for alkali resistance and light resistance according to ASTM C979

#### WATER

Water used for mixing concrete will be potable and free from all sediments and dissolved or suspended matter, which may undermine the quality of concrete as specified under BS 3148. QCBC has the Qatar water and electricity department as its official water supplier.

#### **ADMIXTURES**

Admixtures shall be used in the concrete only with the full approval of the engineer. All admixtures shall comply with BS 5075, if specified.









### ADVANTAGES

#### **INCREASED STRENGTH AND LIFE**

Centimeter for centimeter (Inch for inch), concrete paving blocks are stronger (49 N/mm2 minimum) and more durable than conventional paving materials. Concrete paving blocks can handle the weight of heavy construction equipment of fully loaded tractor-trailers. So you have a product with an exceptionally long life.

#### **LESS ABSORBENT**

Concrete paving blocks have less than 5 per cent absorption, which is considerably lower than both asphalt and poured concrete This provides for substantial to oil and salt, the most common destructive agents to the life and appearance of paving surfaces.

#### **MORE ATTRACTIVE**

Because concrete paving block are available in a variety of shapes and colours, an endless number of beautiful patterns and designs can be created which simply cannot be done with asphalt or poured concrete.







### **ADVANTAGES**

#### **EASIER TO INSTALL**

installation The of concrete paving blocks requires neither the specialised equipment nor the intensive skilled labour as asphalt and poured concrete installations. Interlockina tiles are easy to lay and can be semi-skilled labour. These tiles can also be easily removed and reinstalled later at the same place or elsewhere..

#### **LESS MAINTENANCE**

Concrete paving blocks requires for less maintenance than other materials. paving The strength and durability of concrete paving blocks eliminate costly patching and surfacing. Colour concrete paving blocks make it possible to create mosaics for parking space lines and directional sign, thereby eliminate painting.

#### **EASY REUSABLE**

Unlike asphalt and poured concrete, concrete paving blocks can be removed for access to underground utilities and reinstalled after repairs are completed.

#### **COOLER IN SUMMER**

Concrete paving block remains cooler than asphalt and poured concrete in summer making it the ideal choice of parks, patios, swimming pools perimeters and pedestrian areas.







### ADVANTAGES

#### ALL WEATHER INSTALLATION

Concrete paving blocks can be installed any time of the year, in practically any type of climate. Unlike asphalt and concrete, concrete paving blocks do not require favourable weather and temperature for successful installation. This helps avoid costly construction delays.

#### **GOOD AESTHETICS**

As the blocks come in numerous shapes, sizes colour and textures, the design options are almost endless. This is especially ideal for surfaces of varied widths and where colours are preferred..

#### **COST EFFICIENT**

The interlocking tiles are economical to procure, inexpensive to install and requires little or no maintenance.

#### **HIGH LOAD BEARING**

QCBC interlocking tiles are made of very strong concrete with an average strength in the range between 50 to 70 N/mm2. These blocks provide suitable surfacing for pavements where traffic travels at low speeds (60-50Kmph). Further, these blocks do not soften with oil spillage.







### PRODUCT COLOR CODES





















### PAVING BLOCK LAYING GUIDELINES

Only minimum tools are required for laying the paving block tiles.

#### These are:

- A) Mechanical vibrator for bedding the paving block and compacting the sub base.
- B) Hand operated hydraulic stone splitter for cutting blocks.
- C) For some designs we produce half size.

Typically, there are three layers in block paving.

#### The Sub Base

The lay for a conventional road depends on the nature of the ground and traffic. The sub-base must be free of debris or mud and its surface should be level.

#### The laying course

A layer of carefully screeded sand about 50mm deep. The sand must be washed containing not more than %3 of silt and clay. To achieve the best regularity in the finished road surface, the sand should be uniform in both type and moisture content. It is essential to carry out screeding to the required level, which can be done from the kerb or temporary screed rails. The sand used in the laying course must be laid to surchanges, the amount of which is normally in the range of 15-5mm. This is required as the paving blocks above the laying course will be lowered below the initial level by vibra.

#### The surface course

Each block has to be placed very carefully so as not to disturb the neighbouring blocks. The positioning of the first block demands extra care. To give the required pattern, the block must be placed at the correct angle against a firm starting edge such as a row of concrete channel blocks. All blocks must be laid so that they fit closely. If joints begin to open, the blocks should be knocked together with a mallet. Care must be taken not to tilt the blocks on the loading edge of the laying face by standing or kneeling on them. Where blocks do not fit at the edges, the spaces are filled with cut blocks, split using the hydraulic stone splitter.















### **PAVING BLOCK LAYING GUIDELINES**

#### Vibration

The blocks are vibrated to their final level with a plate vibrator which includes a 10mm thick rubber cushion. A machine with a plate area between 0.2 and 0.3 square meters and centrifugal force of approximately 1 tone is suitable. The vibrator should be guided over of the whole area, avoiding any undertained edge by about a meter. Two or three passes will normally be needed to vibrate the blocks to the finished level.

#### Filling the joints

After the initial vibration, sand is brushed over the surface of the blocks and is vibrated into the joints of 1mm1.5-mm wide by a further two or three passes of the plate vibrator. After all the joints are filled, surplus sand can be swept away.

#### **Installation of Interlocking Pabers**

To achieve a clean and durable pavers surface, it is essential the sub base is carefully prepared.

According to load, apply first of a 10 to 30cm. thick granular base material 30-0mm on top of natural soil.

Compaction is then applied (if neccessary, drainge must be taken into account at this state). This follows 5-3cm. thick sand bedding which must be screeded.

Install pavers into uncompacted sand bed leaving a 3mm installation joint between the tiles. Cober the entire area with fine sand, filling the joints. Use a plate vibrator with rubber to compact pavers into sand bed to the desired level.

The area is immediately ready for use.

















### DIMENSIONS OF PAVING BRICKS

SR. NO.	PAVER TYPE	SHAPE A	ND DIMENSIONS	THICKNESS (MM)	WEIGHT/BLOCK KG.	NO./M <sup>2</sup>
1	UNI SHAPE	STANDARD BLOCK	2.5	60	3.56	
				80	4.75	39
		HALF BLOCK	12.5	60	1.75	78
				80	2.30	
		STARTER BLOCK 45°	225	60	4.40	32
			318.2	80	5.85	
2	RECTANGULAR	STANDARD BLOCK		60	2.95	50
			et 📖	80	3.93	
			+	100	4.91	
				120	5.89	
		HALF BLOCK	<u>s</u> †	60	1.48	100
				80	1.96	
3	BEHATON	STANDARD BLOCK	163	60	4.00	36
	SQUARE			60	5.90	
4		STANDARD BLOCK		80	7.86	25
5	QUADRO	OCTAGONAL	197	60	4.70	25
		CUBE	80	60	0.97	156
6	TRAPEZ (3D)	STANDARD		60	4.30	33
7	DECOR	STANDARD	243.5	60	2.99	45
				80	3.99	











Hollow Bricks 20x20x40cm





Hollow Bricks 15x20x40cm





Hollow Bricks 10x20x40cm







Thermal Insulated Brick 20X20X40cm Polystyrene Th. 7.5 cm



Thermal Insulated Brick 25X20X40cm Polystyrene Th. 11.5 cm



Thermal Insulated Brick 20X20X40cm Polystyrene Th. 6 cm



Hordi Brick for Ceiling 20X20X40cm



Hordi Brick for Ceiling 25X20X40cm



Lite Weight Expnaded Clay Aggregate Brick 400x200x100mm





Lite Weight Expnaded Clay Aggregate Brick 400x200x150mm

Lite Weight Expnaded Clay Aggregate Brick 400x200x200mm

















BLOCK DETAILS											
NO	. BLOCK TYPE	LOC	K SIZE & DIMENSIONS	THICKNE	SS LENG	TH WIDTH	WEIGHT/ BLOCK (Kgs)	PCS / BDL.			
1	HOLLOW BLOCK	8″		200	400	200	20	72			
		6″		200	400	150	16	96			
		4″		200	400	100	12	132			
2	THERMAL INSULATED BRICI	8″		200	400	200	20	48			
		(S 10″		250	400	200	20	48			
	HORDI FOR CEILLING	8″		200	400	200	20	72			
3		10"		250	400	200	20	60			
4	SOLID BLOCK	8″	200	200	400	200	37	80			
		6″	150 200 L	200	400	150	27	88			
		4″		200	400	100	18	88			







Kerbstone is available in cement colour, Red, Black, Yellow and other colour can be manufactured as per customers choice.









Our range of kerbstone are designed to complement your block paving and at the same time serves as an ideal, attractive edge restraint. Extensive engineering and a good selection of components make this an exceptional bonding unit for paving blocks .

## All precast concrete kerbs, channels and edging shall be hydraulically pressed complying with BS EN 1340 and QCS - 2010









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