



Hi-Tech



Profile

Office: KAIROS -313-3rd floor, Ne. Manav Mandir, Memnagar Ahmedabad. M : 9328944704, 9925122922.
Factory: Opp. Market Yard, Village : Koth, Ta. Dholka, Dist. Ahmedabad.
Website: www.hitechpavers.com Email: hitechengineers22@yahoo.com



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Company Profile

HI TECH ENGINEERS is a Ahmedabad based company, successfully offering exterior flooring solutions since 2002 in the Western Region of India.

The range of Cement made products at Hi Tech Engineers includes, Interlocking Concrete Pavers, Glossy Wet cast pavers, Landscaping tiles, Industrial heavy duty tiles, Curb Stones, Exposed Pebble Tiles, Treads and Risers, etc.

Hi Tech Engineers has to its credit supplies to various infrastructural projects, leading corporate bodies, landscape architects, builders, industries and institutions in the country.

Our clients are offered:

- A **value system** committed to giving the best to the **customer**
- **Quality assured** products
- Finest infrastructure to cater to bulk requirements in short times
- **Widest range** of products, colours, textures, Shapes etc.

The special aspects of the manufacturing infrastructure , includes:

- **Fully automatic vibro-compection** technology
- Sophisticated Batching and Imported mixing plants
- Several processing and finishing lines for Value additions to concrete Material
- Complete Arrangement For Testing Laboratory for Compressive, Transverse, Water Absorption and Abrasion Resistance Tests, Solid content, etc



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Projects Executed

HI TECH ENGINEERS products have been approved or recommended, and satisfactorily used for most prestigious applications in the following categories:

- Leading **Consultancy firms** in the Country (including Urban Planning, Engineering, Landscape Consultants, Architectural firms etc) have specified our products for varied applications in prestigious projects.
- **Municipal Corporations** of Ahmedabad, for walk way, Road, Pedestrian and other applications.
- **Public Spaces** like Railway Stations, Airports, Parks etc.
- Leading **Builders** in the Western Part of India for Landscaping and also for internal Road applications of their projects.
- Petroleum and Gas retailing companies including Essar, Super Gas **Petroleum Retail outlets**.
- Several **Corporate Offices, Malls, Multiplexes, Clubs, Hotel Campuses, Institutional Campuses** like Colleges, Schools, Hostels etc.
- Several **Industrial applications** of roads, within factory shed etc.
- **Contractors** across all section from the biggest corporate groups to ones doing single small projects at a time.
- Individual **residential applications** like farm houses, houses etc.



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Product Range

Exteriors
Pavers and Cobbles
Blocks for paving- Can be fixed on a sand bed, Typically thicker than 45mm in size
Range and Applications
HSF- High Strength high finish regular paver blocks.
Ciottoli- range of concrete cobbles
Combi Ciottoli- Combination of cobbles to give extremely flexible design option.
Flags- Pavers in sizes over 300*300 mm for hard wearing and aesthetically pleasing surfaces.
Bellezza- Glossary (reflective) Pavers
Eco Pave- Grass pavers, pavers allowing Percolation of water back into the ground, and pavers with over 95% recycled materials
Application- Municipal roads, Bulk Cargo handling areas, Ports, Airport roads, Service, Internal Roads of Residential, Commercial and industrial premises, Warehouse, Shopping Plaza, Pedestrian Plaza, All landscaping applications etc.
Types of Finishes available
<ul style="list-style-type: none">• Plain• Shotblasted• Shotblasted and Coated• Tumbled- (rustic with rounded edges)• Wet Cast (Lacquer Coated)
Size available in mm
In plan size from 100*100 to 400*400 and in various rectangular as well as in interlocking shapes. In thickness from 100mm to 45mm
Excellent Substitute for
Concrete and Asphalt Roads, Other paving solution for high traffic areas.



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Technical Specifications

Paving Blocks

Sr. No.	Particulars	Specifications as per IS 15658	
		<100 mm Thick	>100 mm Thick
1.	Water Absorption	Not more than 6%	Not more than 6%
2.	Compression Strength	300-500 Kg/cm ² at 28 days	500 + Kg/cm ² at 28 days
3.	Abrasion Resistance	Average wear not more than 1.5mm	Average wear not more than 1.5mm
4.	Variation in Length/Width	Variation +/-2 mm Max.	Variation +/-2 mm Max.
5.	Variation in Thickness of Blocks	Variation +/-3 mm Max.	Variation +/-4 mm Max.
6.	Thickness of wearing layer	Min 6mm	Min 6mm
7.	Squareness	Variation +/-2 mm Max.	Variation +/-3 mm Max.



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Brief list of some of our valued clients

CORPORATIONS

1.	P.W.D. Diu
2.	Vanthali Junagadh Nagar Palika
3.	Ahmedabad Municipal Corporation, Bapunagar Ward

PROJECTS

1.	RAAS Infra Port	Kandla
2.	Shree Renuka Sugar Limited	Gandhidham
3.	Larsen & Toubro Limited (ECC Division)	Halol, Gandhidham-Samarkhiyali Road Project
4.	K. K. Trust	Samed Sikhar, Jharkhand
5.	Adani Township & Real Estate Company Pvt. Ltd.	Ahmedabad
6.	Baghel Infra. (P) Ltd.	Singrauly
7.	Larsen & Toubro limited	Samakhiyali
8.	TATA NANO Plant	Sanand
9.	Godrej Garden City	Ahmedabad



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INSTITUTIONS AND HOTELS

1.	Marwadi Collage	Rajkot
2.	Swaminarayan Sanskar Dham (Gurukul)	Dhrangadhra
3.	Tulip Charitable Trust	Ahmedabad
4.	Hotel Courtyard Marriott	Ahmedabad
5.	Bhagyoday Hotel	Changodar
6.	Raddison Hotel	Gandhidham
7.	Sarvotam Hotel	Baska (Vadodra)
8.	Grand Sangirila Hotel	Ahmedabad
9.	Prabhat Hotel	Majethi
10.	Kalapi Hotel	Nandasan
11.	Amiras Hotel	Nandasan
12.	Sarvoday Hotel	Moraiya
13.	Flora Hotel	Siddhpur
14.	Rose Garden Hotel	Siddhpur



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INDUSTRIES

1.	Bosch Plant	Sanand
2.	Vishal Engineering	Ahmedabad
3.	Katariya Transport	Ahmedabad
4.	ACME Pharma Pvt Ltd	Changodar

PETROLEUM SECTOR

HPCL

1.	Digvijay Petroleum	Khorasa Gir
2.	K. S. Petroleum	Maliyasan
3.	Shree Sant Petroleum	Bed
4.	Tirupati Petro Fuel	Tankara
5.	Rajmoti Petroleum	Daldi
6.	Raj Petroleum	Kolithad
7.	Akshar Petroleum	Babiya
8.	Bansal Petroleum	Maliyasan
9.	Shreeji Petroleum	Vasawad
10.	Hanumant Petroleum	Damnagar
11.	Chamunda Petroleum	Thol
12.	Vadilal Maganlal	Bavla

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IOCL

1.	Arvind Petroleum	Gota, Ahmedabad
2.	Gujrat Auto	Narol, Ahmedabad
3.	Zazwala Petroleum	Pratij
4.	Subham K S K	Tintoi
5.	Bansidhar Petroleum	Bagodra
6.	Dev Petroleum	Bopal, Ahmedabad
7.	Maruti Nandan Petroleum	Dhansura
8.	Umiya Petroleum	Randheja
9.	Rajmoti Road Movers	Virodar
10.	Gadh Petroleum	Gadh
11.	Meet K S K	Bhatsan
12.	Delux Petroleum	Jetpur
13.	Hariom Petroleum	Gozariya
14.	Shree Keshav Petroleum	Kadi
15.	Ramesh Trading	Veraval
16.	Mahesh Trading	Junagadh
17.	Shri Anjanay Petroleum	Junagadh
18.	Dwarkesh Petroleum	Bavla
19.	Amreli Dist Co Opp Soc	Amreli

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20.	Punjab Petroleum Sevice	Tajpur
21.	Janta Fuel Center	Pratij
22.	Maruti Nandan Petroleum	Mangrol
23.	Maruti Nandan Petroleum	Dhansura
24.	Shiv Petroleum	Rana Kandorna
25.	Bileshwar Petroleum	Kukarwada
26.	Chandan Sevice Station	Patan
27.	Lakhtar Petroleum	Lakhtar
28.	Bhavin Petroleum	Bhesan
29.	Shail Ganga Petroleum	Veraval
30.	Jalaram Agency	Mendarda
31.	Veer Petroleum	Khodu
32.	Nandani K S K	Medhasan
33.	Tejas Petroleum	Dhinoj
34.	Geeta K S K	Anior
35.	Shree Ram Petroleum	Ramol
36.	Mahavir Petroleum	Satlasna
37.	Divyesh Petroleum	Memar, Bagodra
38.	Central Auto Filling Station	Vasanda
39.	Shah Automobiles	Silvassa

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BPCL

1.	Swaminarayan Petroleum	Viramgam
2.	Om Petroleum	Nandasan
3.	BP Coco, Shashtrinagar	Ahmedabad
4.	Ravi Petroleum, Sardar Nagar	Ahmedabad
5.	Mercury Service Station, Ashram Road	Ahmedabad
6.	Krupa Petroleum, Ellis Bridge	Ahmedabad
7.	Shraddha Petroleum, Bodakdev	Ahmedabad
8.	Sarojba Petroleum, Chiloda	Ahmedabad

ESSAR

1.	Somnath Petroleum	Disa
2.	Gurukrupa Petroleum	Ratnal
3.	Rajdhani Petroleum	Prachi
4.	Shree Ram Petroleum	Dhrangadhra
5.	Bhagyoday Petroleum	Sutrapada
6.	Shiv Petroleum	Chital
7.	Maruti Nandan Petroleum	Dahegam
8.	Mateshwari Petroleum	Chotila
9.	Umiya Petroleum	Malvan
10.	Lallan Petroleum	Ravapar

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11.	Sardar Petroleum	Kalawad
12.	Karuna Sagar Petroleum	Vijapur

CNG and LPG Station

1.	Super Gas	Bavla
2.	GSPC Pump	Chharodi
3.	GSPC Pump	Bhavnagar



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PLANT AND MACHINERY DETAILS

Manufacturing Equipments

Name of the Machine	Capacity/Rating
Automatic Block Manufacturing Machine Columbia Make	15000 Blocks/shift
Automatic Block Manufacturing Machine Noah Make	12000 Blocks/shift
Automatic Block Manufacturing Machine from China	10000 Block/shift
Hydraulic Press Machine (3 Nos)	1000 Blocks/shift
Vibrating Table for wet cast Paver Block (12 Nos)	12000 Blocks/day
Concrete Mixer one bag (6 Nos)	Max 300Kgs/charges
Concrete Mixer half bag (6 Nos)	Max 150Kgs/charges
PAN Mixer (3 Nos)	Max 600Kgs/charges
Solid Block making machine (1 Nos)	800 Nos/shift
Kurbstone Manufacturing Machine (1 Nos)	400 Nos/shift
Batching Plant	15 m ³ /hour
Double shaft mixer	Max 800Kgs/charges
Drum mixer ball and hammer type (3 Nos)	Max 250Kgs/charges

Processing Equipments

Name of the Machine	Capacity/Rating
Shot Blasting machine	2000 sq.ft/shift
Block Cutting Machine	NA
Compactor Machine (3 Nos)	NA
Rotary Grinder Machine	NA
Drying Machine	NA

Material Handling Equipments

Name of the Machine	Capacity/Rating
Forklift Truck (1 Nos)	Max 3 Tonnes
Pallet Truck – Hydraulic (6 Nos)	1500 Kgs
Tractor with Loader	Max 1 Tonnes
Manual Lorry (12 Nos)	NA

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Testing Equipments

Name of the Machine	Capacity/Rating
Weighing Scale (4 Nos)	Upto 100 Kg
Compression Testing Machine	2000 KN
Hot Air Oven	0-300 Deg C

Workshop

Bench Grinder Machine
Drill machine
Gas Welding Set
Hack Saw Cutting Machine
Gas Cutting Machine

Utilities

Diesel Generator (2 Nos)	125 KVA
Air Compressor Big (2 Nos)	7.5 HP
Air Compressor Small (1 Nos)	



QUALITY PLAN-PAVERS-INPROCESS

Stage	#	Inspection Parameter	Specification	Inspection Frequency	Inspection/Testing Method	Responsibility for Inspection	Accepting Authority	Inspection Record
Moulding Pavers	1	Thickness of first layer	PN – 19	First few pieces after change of every setting or every three hours	Scale	P.O.Mounting	P.O.Mounting	FR - 61
	2	Total Thickness	PN - 18		Visual			
	3	Side finishing (for paving block only)	Smooth		Scale			
	4	Even spreading of first layer	4mm min.		Visual			
	5	Finishing of top layer	As per Master Sample		Visual			
	6	Surface defect viz.	Defect free		Visual			
	7 . 1	Broken edges / corner						
	7 . 2	pinhole, dent						
	7 . 3	Improper design						
	8	Back layer distribution	Even		Visual			
9	Back layer moisture	Fully Damp- No dry spots						



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SAMPLING PLAN FOR DAILY TESTING OF PAVERS

Particulars	Sample Size	Testing Stage	Acceptance norms at 3 days			Action in Event of NC
			Specified Strength in Kg/cm ²	Minimum acceptable at 3 days	Retesting not required*	
1. Compression strength test as per IS 516	4 Pavers per day per item	2 Samples at 3 days- Min req. 200 Kg/cm ²	250/300	125/150	195	If the average strength of pavers so tested fails to meet the requirements of the test, twice the number of pavers shall be tested. These shall be drawn from the same lot/batch where failure has occurred. If the average strength of pavers so re-tested again fails to meet the requirements of the test, such lot must be disposed as non conforming lot.
			350	175	230	
			400	200	260	
		2 Samples at 28 days of manufacture	450	225	290	
			500	250	325	
2. Percentage Water Absorption	Brass <u>Lot size</u> <u>Pcs,</u> 50-up 3	Before <ul style="list-style-type: none"> • Despatch • 10 Days whichever is earlier	If not specified, should not exceed 10%			
3. Average wear in thickness (Abrasion)	Brass <u>Lot size</u> <u>Pcs,</u> 100-up 2	At 28 days of manufacture, before 35 days of manufacture	If not specified, should not exceed 3.5 mm			
4. Thickness of wearing layer	Brass <u>Lot size</u> <u>Pcs,</u> 50-up 3	On day of manufacturing	If not specified, min thickness of top layer shall not be less than 4 mm			
5. Size (Length+breadth)(Shape dimensions and tolerance)	Each paver unit taken for testing	At 3 days	Variation not to be exceed + or -2 mm			
6. Variation in thickness of pavers	ditto	At 3 days	Variation not to be exceed + or -3 mm			



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AGGREGATE GRADING

Specific Gravity

Cement	3.15
Coarse Aggregate (10 Dn)	2.72
Fine Aggregate	2.68
Fly Ash	2.20

Dry Bulk Density

Coarse Aggregate (10 Dn)	1.336 gms/cc
Fine Aggregate	1.684 gms/cc

Average Water Absorption

Coarse Aggregate (10 Dn)	0.35%
Fine Aggregate	1.30%

Sieve Analysis for Aggregate

%age passing

Sieve Size	10Dn	Fly Ash	Sand
10.0mm	100	100	100
08.0mm	095	100	100
4.75mm	054	100	097
2.36mm	032	100	095
1.18mm	005	100	084
600 h	003	010	054
300 h	000	000	004
150 h	-	-	000



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CURING PROCESS

The curing process is carried out at our plant as under:

Manufactured material is taken to enclosed curing chamber within approximately 5 minutes of production. The material is subjected to extremely moist and humidified chambers where relative humidity is around 90%

Such curing is carried out for a minimum of 24 hours since the time of production

After this initial curing, the product normally achieves 50-80 % of its final 28 day strength.

Thereafter the good are removed from the curing area and packed/stacked for further curing.

Thereafter sprinkling curing is continued for a minimum of 7 days or as required, till the product reaches its specified strength.