

SURAT, THE SILK CITY OF INDIA

Surat means synthetics. No need to explain. For sourcing one's requirement of polyester and art silk sarees and dress material one has not to scratch his head. Surat automatically comes in mind. Probably there may not be any saree wearing lady in the country, who may not be aware of 'Garden', the well established brand for

SURAT SAREES



polyester / silk sarees and dress material produced by Garden Silk Mills, Surat.

Surat city is full of spirit. Resonating sound of powerlooms, chimneys of processing units, colourful fabrics on carts and auto vehicles being transported from one place to other, typical sound of texturising

units, bustling cloth markets, growing economy etc. have become the lifeline of Surat people. There may not be any coach in a train coming from any place in the country and touching Surat, that a few passengers related to textile activities may not be dropping down at Surat. As Tirupur is known for knitted hosiery goods, Surat is an icon for synthetics. Nearby Silvassa. Daman is growing fast to meet the texturised yarn requirement of Surat. Textile processing activities for dyeing and printing of synthetic sarees and dress material have grown up fast and typically the processing units are all mechanised power operated, in small to medium size from low to state-of-the-art technology. Many textile processing machinery manufacturers have come up to supply well accepted, economy processing machines, to processing units at Surat, other parts of the country and abroad. Brief details of Surat cluster are given hereinbelow :-

- **Surat a major trade centre for generations :**

Surat maintains a leading position as a great trading centre for generations, for three reasons.

Firstly, its' strategic location on the west coast of India (Arabian Sea), from where the trade naturally took place from north to south. Secondly it could draw upon the rich hinterland of Gujarat, which produced large quantities of rice, wheat, butter and sugar. And thirdly it had developed the essential social and economic infrastructure essential to organise trade in large volume and finance it adequately.

- **Location :**

The city is situated on the left bank of Tapti river, 14 miles from its' mouth. It is about 270 kms from Mumbai, the Indian financial capital and about 230 kms from Ahmedabad, another textile centre of India. It is connected by major road and rail links. Nearest airport is Vadodara.

Surat is surrounded by Bharuch, Narmada (North), Navsari and Dang (South) districts. To its' west is Gulf of Cambay

[SURAT LOCATION MAP](#)



- **Climate :**

Average rainfall is 1000 - 1200 mm and temperature ranges from 7 - 45 degree celcius.

- **Infrastructure :**

It has got all basic infrastructural facilities like schools, colleges, ITIs, Polytechnics, textile institutes, banks, post and telegraph facilities, telecommunication facilities, power substations, Govt. industrial Corporations / estates, industrial co-operative estates, highways, ports and large number of textile markets.

- **Industrial activities :**

The city is known for its textile and diamond trade. It's diamond trade has seen rapid strides from 1901 when first diamond cutting unit was started by Gujarati diamond cutters migrated from East Africa. By 1970 Surat diamond cutters had begun to export polished stones to USA. Diamond export has achieved an exponential growth since then and it is worth more than US dollar 8 billion now.

DIAMOND CUTTING



Surat is also an industrial hub for the production of synthetic fibres and manmade fabrics contributing about 30% of India's total synthetic fibre output and 40% of the nation's total manmade fabric production. It is distinguished as "Manchester of the East". With the change in time value addition activities on textiles produced at Surat have gained momentum, resulting in better profit margins.

- **Textile history of Surat :**

Existence of Surat city dates back to the year of Mahabharat i.e. 3000 B. C. A pilgrimage named "Gai Pagli" (cows feet) symbolises footprints of herd of cows carried by Lord Krishna from Mathura to Dwarka via Surat.

Surat in its existence, suffered many ups and downs. It had several floods and fires, riots, invaders

attacks, epidemics and many other odds. It survived all. It was a major port in Western India and hence always remained busted with trade activities throughout its existence, whether such activities were captured by locals or outsiders.

During Moghul regime, Surat became famous for producing "Kinkhabs" with intricate designs of Jari on silk fabrics, woven on handlooms.

SPECIMENS OF KINKHABS-BROCADES & CLOTH OF GOLD SILVER



Surat, during 17th century was known as prominent centre for export of painted coverings in extensive range and qualities. Other items produced were wall hangings, canopies, floor spreads etc. in rich natural colours. In 1624, first trade was negotiated with Holland through Surat, with cargo of Indigo. Silk and cotton goods exported from Surat during first half of 17th century (1608

to 1658) were used by the habitants of cape of Good Hope to China. In 1861 first textile mill i.e. "Zafarali Mill" was set up at Surat. First Gin press was set up in 1873, by Shree Pestonji Bejanji and Shri Gokuldas Sheth. By 1891, Surat had one weaving mill, one spinning mill, four gin presses, one iron factory and one paper mill.

Between the period 1935 - 37, the household cottage textile activities of Surat got a boom on account of heavy duty on import of artificial silk. A nucleus of powerlooms started building up and around 1200 powerlooms were installed at Surat by the time of Second World War. The second World War gave a further impetus and Japanese machines were brought in Surat for weaving and twisting etc. Present growth of powerlooms and texturising finds genesis from here.

In 1965, a cooperative spinning mill was set up at Surat. Until this time majority of silk sarees and cloth was being woven on handlooms. With introduction of powerlooms, a few entrepreneurs purchased discarded powerlooms from the mills and modified them to weave silk sarees and fabrics on powerlooms.

Subsequently, when Govt. of India reduced duty on synthetics, the situation took a turn and the decentralised powerloom sector of Surat gradually adopted synthetics. Therefrom Surat has made rapid strides and spectacular growth and has acquired the top position in regard to synthetic textile production, particularly sarees and dress material.

It was natural that when weaving activity develops, it will create opportunities for the backward and forward integration. Texturising and processing activities received a pushback from the development of weaving

industry. Surat city now has state-of-the-art powerlooms, texturising machines and textile processing units. It has got a mixed industrial profile from one loom units to giant size powerloom units, having semi automatic, automatic, shuttleless powerlooms and waterjet looms etc. It has got textile processing units with primitive technology machines to hi-tech processing units. Internationally established brands like Garden, Vipul, Parag, Prafful, Pratibha, Poonam, Gupta sarees and many others are manufactured and processed at Surat. Surat accounts for about 30% of total powerlooms functioning in the country.

- **Industrial profile :**

Surat industrial profile boasts of gigantic industrial infrastructure. Industry is housed in several industrial estates of which major industrial estates are :

- ❖ Sachin
- ❖ Pandesara
Katargaon
- ❖ Hojiwala
- ❖ Udhyog Sangh
- ❖ Udhna Udhyog Nagar
- ❖ Palsana
- ❖ Udhna-Mangdalla Road
- ❖ Khatodara
- ❖ Ved Road
- ❖ Kim Pipodkara
- ❖ Salabatpura
- ❖ Kapodara

Industrial profile is as under :-

- i) Cluster has got 3 synthetic staple fibre / filament yarn manufacturing units
- ii) 3 spinning units are functioning at Surat cluster
- iii) There are around 350 texturising and twisting units having around 2500 texturising, draw twisting and crimping machines producing around 6 lakh Metric Tonnes yarn with the estimated value of Rs.7700 crore annually. This segment of the industry employs around 25000 persons.
- iv) 3.5 Lakh powerlooms comprising 2150 new semi-automatic looms, 2500 automatic (Shuttle change) looms, 6200 shuttleless looms (rapier and water jet mostly second hand), 226450 looms with dobby or jacquard attachments and let off motion attachments and remaining plain non auto looms. Average no. of powerlooms in a unit is 12. Usually no. of units operate in a common shed to keep SSI status. Annual production of grey fabrics on such powerlooms is around 800 crore metres with the sales value of Rs.12000 crore. This sector with the total investment of Rs.3700 crore, employs around 4 lakh persons.
- v) 3000 embroidery machines, 300 shiflee and other value addition activities with the investment of Rs.3000 crore, give a turnover of Rs.6000 crore on job work charges and employ around 1.40 lakh persons.

- vi) There are around 470 processing units. At an average capacity of 75000 mts per day 1200 crore metre fabric is processed annually with the job work turnover of Rs.8000 crore. The total investment being Rs..4500 crore and employment of 3.40 lakh persons.
- vii) There are about 38 knitting units, with average of 24 knitting machines per unit.
- viii) Trading activities generate a turnover of around Rs.26000 crore and employment of 2.5 lakh persons.
- ix) About 28 major textile machinery manufacturing units (12 weaving and preparatory, 10 Processing and accessories and 6 spares, component and others) at Surat supply machines to textile manufacturers and processors locally, other textile clusters of India and abroad.
- x) More than 2500 support service enterprises like design development, spares supply, dyes and chemical suppliers have set up their establishments at Surat
- xi) 5 Dyestuff and 2 Chemical and allied manufacturing units are operational at Surat cluster.
- xii) Surat cluster contributes to around 12% of the total synthetic textile export from the country. The total value of exports in the year 2004 - 05 was Rs.1097.34 crore. Main destination of export are USA, UK, Spain, Sri Lanka, Uganda, France and Canada.
- xiii) Surat cluster consumes 4.5 lakh Tonnes (Rs.4950 Cr.)PFY, 0.30 lakh Tonnes (Rs.720 Cr), NFY, 0.40

Lakh tonnes (Rs.900 Cr) VFY and 0.80 Lakh tonnes (Rs.1120 Cr) blended, silk and jari.

- **Conversion charges :**

Conversion charges for sarees and dress material on plain loom are Rs.4-5 per metre, dobby 6 - 7 per metre, jacquard Rs.8-9 per metre and lining cloth / paper silk on water jet shuttleless looms are 10 - 12 per metre. Dyeing charges are around Rs.4.50 to 7.00 per linear metre and printing charge Rs.5.00 to 10.00 per linear metre. Digital printing costs Rs.60 to Rs.300 per square metre depending on the design and technology. Economy of Surat depends on it's textile and diamond industry. Buyers from all over the country and outside visit Surat for their requirements. Many entrepreneurs from various parts of country have put up their units at Surat. They have either settled at Surat or visiting very frequently. Trade activities, screen and design making, dyes and chemical suppliers, consultancy, hotel and restaurant activities, transportation, security services and host of other allied activities have given job to thousands of people at Surat in addition to huge labour force, technicians and managerial personnels getting direct employment in Surat textile units. It is the largest industrial hub for synthetic and manmade fibre fabrics. It has been designated as the "Manchester of the East" since British rules.

- **Product profile :**

Major products of Surat textile cluster are various varieties of 100% polyester dyed / printed and / or embroidered saree fabric and dress material. Some of the units are engaged in manufacturing of 100% viscose or 100% silk sarees / made ups, 100% curtain cloth, 100% polyester knitted fabrics and P/V blended shirtings. With the change in trade scenario, a few entrepreneurs have also started manufacturing 100% cotton or its' blended fabric as well as technical textiles.

GEORGETTE SAREES



There are more than 40 major varieties of sarees and dress material fabrics made from various types of polyester filament yarn in varying reed-pick, ranging from 68 x 64 to 112 x 80, 112/2 x 88, 88/5 x 88, 92/4 x 76 etc. Products range from dyed / printed chiffon, georgette sarees, brasso, satin, crepe, Bandhani, dobby, jacquard, plain dyed / printed etc.

Fabrics made from cationic dyeable polyester yarn are produced in various varieties viz. Paper silk, paper silk jacquard, georgette in reed-pick varying from 72 x 68 to 108 x 100, 80/3 x 88 etc. Nylon weft is used with bright polyester warp in some products.

More than 20 major products are made out of Nylon filament yarn (mono, semidull, dyed etc). The reed-pick ranging from 88 x 60, 80 x 72 to 120 x 120, 140 x 60 etc. Main product ranges are China Tissue, German Tissue, Lungi checks, Banarasi lining, window checks, georgette, Jari fabric, jacquard and Dupatta etc.

Fabrics made from Viscose filament yarn are 60 x 60 georgette, 100 x 100, georgette viscose rayon, 100 x 100 georgette jacquard, Viscose jacquard and 120 x 120 dull viscose crepe varying from 60 x 48 reed x pick to 88 x 80, 92 x 56 reed x pick.

Fabrics made out of Bremberg Viscose yarn are 30 x 30 chiffon, 30 x 30 georgette, 40 x 40 georgette, 40 x 40 Lycra etc. varying from 60 x 60 reed x pick to 88 x 80 reed x pick.

Fabrics made out of pure silk yarn viz. georgette, chiffon, jacquard ranging from 96 x 80 reed x pick to 120 x 120, 84/3 x 114 etc

Technical textiles like industrial clothes made from 210 x 210 Nylon (112 x 52), Sley Patti made from 150 x

150 Nylon crimped 2 - ply, label tape 620D Polypropylene + 4.25 no. rubber x 150 D polyester, double cloth jacquard (polyester) tapestry fabric jacquard / (polyester) both 44/4 x 64, velvete (viscose) 60/5 x 98, warp knitted Raschel knitted fabric made of polyester - viscose 18 guage 25 course / cm, velvet cotton (dobby) made from cotton - viscose (78 x 60) and SS wire mesh made from 417 mm SS wire both in warp and weft (16 x 16 mesh).

More than 20 varieties of value added fabrics are produced using polyester normal, crimped and flat yarn - with the reed x picks 68 x 64, 88 x 80, 96 x 56, 88 x 80 to 30 x 30 georgette, 72 x 64, 96 x 88, 72 x 68 - 70/72 aroma dyed crush, 96 x 86, 72 x 64, 80/5 x 88 and 65/3 x 60 etc. Various products are :- Badla work, M/c Aari with Tikki Moti both with micro yarn with hand work or hand and machine work, chicken embroidery, Rope crush / crush fabric (tissue dyed crushing), Prime print dew - drop (Prime chiffon dew-drop printing), Pleating effect fabric (Metallic chiffon pleating), spangle orange chiffon (orange chiffon spangle), Prime Embose (Prime chiffon - mechanical embossing), 30 x 30 dyed with embroidery (computerised multihead embroidery), Laminating fabric (Japan crepe laminating machine), Smog fabric (Orient crepe dyed smog), Ceramic dot (Lazer ceramic dot), Paper print with crush (Transfer printing), Laser Plasma, Orient foll (Orient crepe dyed foll prints), Marriage prints / Korean Pearl etc. Fabrics made of cupramonium filament yarn are also produced as chiffon dupatta using flat - bright yarn with reed x pick 84 x 96 and 76 x 88 with 2.4 to 2.7 and 3.1 to 3.4 kgs/100 mts weight and 52" width.

Units are importing mainly acetate yarn which is not manufactured in India. Twisters and texturisers import POY depending on the economy of price in India vis-à-vis import.

Dyed / printed sarees ranging from Rs.60 to 3000 per saree and dress material ranging from Rs.200 to 1500 per set are manufactured at Surat. Further value addition is given by embroidery, bead work, buta cut and many other artistic value addition work.

- **Environmental responsiveness :**

Water for processing is available at Surat through Ukaidam. Surat processors are committed to environment. Majority of the units have installed effluent treatment plants of primary / secondary level, depending on their process / requirement. They observe the emission norms and submit regularly to State Pollution Control Board, the Environmental statements as required under the law. Common effluent treatment plants have also been set up at Surat for treatment of effluents of member units to secondary level and to discharge the effluents with permissible effluent quality. A project is being envisaged to treat the dye house effluents to an appropriate level, convey them to nearby sea water and discharge into marine water, observing permissible emission standards. Waste minimisation groups at Surat socially take care of the waste from industrial and domestic activities. Major effluent treatment plants and environment related projects underway are as under :-

S. No.	Name of Project	Capacity	Investment
1.	Common Effluent Treatment Plant at Pandesara	100 MLD	Rs.110 crore including pipeline
2.	Common Effluent Treatment Plant at Sachin	50 MLD	Rs.20 crore
3.	Common Effluent Treatment Plant at Katodara	50 MLD	Rs.35 crore
4.	Common Effluent Treatment Plant at Palsana	50 MLD	Rs.38 crore

- Integrated common hazardous waste treatment, storage and disposal facility of Gujarat Enviro Protection and Infrastructure Ltd. :

Gujarat Enviro Protection and Infrastructure Ltd. is the first private sector company promoted by Luthra group. It has got integrated common hazardous waste management facility in a plot of 30 hectares at Village Gabheni Road, Near Sachin GIDC, with a total disposal capacity (secured landfills) of 35 lakh tonnes, total incineration capacity of 10 thousand tonnes per annum at 1200 degree celcius, total solidification / stabilisation capacity of 60 thousand tonnes per annum

and proposed life of 35 yrs. It has so far 500 member units. It collects hazardous waste from the member units at Surat cluster, transports such wastes to treatment facility, treats and disposes of such wastes at the above facility based on their characteristics in environmentally safe manner and as per regulatory requirements. Type of wastes include ETP sludge, iron sludge, Gypsum sludge, Process sludge, paint sludge, pesticide wastes, heavy metal bearing waste, halogenated organic waste, asbestos bearing waste, waste oil containing PCBs and PCTs, all type of organic incinerable wastes and distillation and tarry residues. The site in addition to the infrastructure required for the above activity, also operates a training centre for cleaner production, hazardous waste management training centre, green belt and forestation.

- **Gujarat Eco Textile Park :**

Proposed in 73 acres area at Palsana, District Surat at Palsana Crossing, NH-8, 22 kms from Surat railway station, 250 kms from Ahmedabad and 270 kms from Mumbai, houses weavers, embroiders and processors all under one umbrella to give convenience and comfort to the buyers and all stakeholders. It is supported by Govt. of India, Ministry of Textiles under it's scheme of Integrated Textile Parks (SITP) and Govt. of Gujarat under its cluster management and other schemes as public - private partnership project. It boasts of facilities like cheap power through captive power project supported under Technology Upgradation Fund Scheme (TUFS) of Govt. of India, Ministry of Textiles, Common Effluent

Treatment Plant, GRP drains for effluents, common solid waste management and disposal plan (incineration) waste to energy concept, water supply system, centre for excellence (common laboratories for quality, environmental, chemical and physical testing, CAD centre, Conferencing), meeting facilities, training centres, consultant house, library and exhibition hall), banks, warehouses, stores/shops, Gas station and telecommunication, RCC roads, storm water management, rainwater harvesting, street lights, green belt, common parking areas, canteen and restaurants, fire station, first aid medical centre and weigh bridges. It will operate on industrial ecosystem and symbiosis having various components such as cleaner production, Environmental Management System, environmental management auditing, waste reduction, conservation of energy, effluent treatment and solid waste disposal.

- **Other Projects :**

- i) **Shri Laxminarayan industrial Cooperative Service Society Ltd., Gujarat :**

This project is also envisaged under SITP scheme of Govt. of India, 10 kms away from Surat railway station. The proposed park would have 73 weaving units to produce 3,27,750 metres of fabric and 52 embroidery units to produce 1,31,600 metres of embroidered fabrics in 41.86 acres area with common infrastructure like arterial road, sub arterial roads, water supply storage and distribution network, storm water drainage system and effluent collection

system in 13.18 acres, common facilities like common warehousing, testing facilities, administration building, fire fighting, dispensary and rest house in 1.27 acres, factory buildings in 23.06 acres and open / green space in 4.36 acres. Total project cost of Rs.136.48 crore will be financed through Rs.40 crore grant under SITP scheme and Rs.96.48 crore as equity share capital from promoters. Total investment in the park is expected to aggregate to Rs.670 crore. The combined sales turnover of the units in this park would be to the tune of Rs.638.23 crore annually. Operating and maintenance of the parts is vested with Shri Laxminarayan Industrial Cooperative Service Society Ltd., a SPV, incorporated at Surat on 27.9.2004.

ii) [Surat Super Yarn Park Ltd., Surat Gujarat :](#)

This project is also envisaged under SITP Scheme at Village Hathura, Surat, 40 kms away from Surat railway station, 2 kms off, Ahmedabad - Mumbai NH-8A. It would have 54 texturising units to produce 432 tonnes of texturised yarn in an area of 26.93 acres comprising of common infrastructure in 10.20 acres, common facilities in 3.44 acres, factory buildings in 10.48 acres and open / green space in 2.80 acres, Project cost of Rs.106.21 crore would be financed through promoter's contribution of Rs.26 crore, (equity share capital of Rs.10 crore, infrastructure fee of Rs.16 crore), SITP grant of Rs.40 crore and term loan of Rs.40.21 crore. Estimated investment in the park is 230.56 crore. The project would generate a direct employment of 1000 persons and

indirect employment of 2000 persons. The annual sales turnover is expected at Rs.1250 crore. Surat Super Yarn Park Ltd., a SPV incorporated on 29th March 2006 will undertake its' operation and maintenance.

- **Problems and suggestions :**

- i) Lack of technical input :**

Where textile processing activities are there, problems are bound to be there since it is an specialised job. While leading entrepreneurs keep them abreast of new technologies, employ trained manpower, take care of the environment, etc, there are small players too, who are either not keen about quality of product and environment or do not have ample resources to plug the gaps. No doubt Surat has got all sort of technologies from low to high, the lower spectrum is spoiling the image, as a result of which Surat is still not able to boast itself as a producer of high quality goods at competitive price. Availability of technically qualified trained manpower is a problem and there is a lot to be done to adopt the advanced technology to produce quality goods and increase the productivity.

- ii) Replacement of old age looms with high tech powerlooms :**

Cluster depends on old technology plain, semi automatic and automatic (Shuttle change) looms. Of late the cluster is installing shuttleless rapier and waterjet looms, mostly second hand but number is not

sufficient. Majority of powerloom owners are not adequately literate and are dependent on jobbers having old age mentality, resulting in low productivity and quality. Textile processing units in the cluster have come of late and have more or less medium level technology machines but inappropriate quality of fabric and job work culture is an impediment to quality processing. Majority of products are from cheaper segment (a printed polyester saree is sold at as low as Rs.60/- per saree), there is limit to which improvement in quality of fabric and processing can be done. Value addition activities are injecting fresh blood to the industry and because of such value addition and quality products of some units, the cluster is surviving. There is need to go in for high quality, reasonably priced goods by installing high-tech powerlooms, replacing the old age low technology powerlooms.

iii) Organised marketing setup needed :

Surat has got all infrastructure and support that a cluster may need. It has got 142 textile markets for finished goods in addition to few markets of grey goods. Weavers sell their fabric to merchants who get them processed and sell in the various markets. Weavers are totally exploited because of their weak financial position for working capital. Merchants exploit processors also by strongly negotiating the job charges. In the process, merchants or brokers make money compromising the quality of ultimate products. Cloth merchants do not have time to deal with the weaver and processor and in the process, middleman makes mery. An

organised set up for marketing is required to be created. Ensuing textile / Apparel Park may bring a change in the set up.

iv) **Forward integration to garmenting :**

Surat has got ITIs, polytechnics for trained manpower, a textile research association (MANTRA) to provide quality testing and R & D support, 3 Powerloom Service Centres for training of weavers and limited testing facilities, offices of Export Promotion Councils, CAD Centres, dyes and chemical manufacturing units, machinery manufacturing facilities, eminent textile professionals, environmentalists, energetic and pro-active entrepreneurs, pro-active local govt. and semi-govt. bodies, Special Economic Zone, environmental management projects, skilled manpower and a large no. of textile markets, strong powerloom weavers, exporters and processors association etc. There is no reason why the industry at Surat has not been able to make rapid strides. Tirupur is the success story of just 25 yrs. Surat is in the field far more. It is high time Surat entrepreneurs should rise to the occasion and move with the global demand. Professional management and skilled input is the need of hour. Mean thinking of quick gains should be given up and a broad global perspective should take place to strengthen the quality production and integration on a wide scale. Garment manufacturing would install the Surat cluster at world map of textiles and would increase their profit margin. But garment manufacturing would need high quality fibre, high quality yarn, high quality fabric, high quality

processing, high quality finishing, high quality machines, dyes, chemicals and technical input. Each entrepreneur is required to plan in that way and it should be a collective approach to develop the cluster as a whole as a High-Tech, High-Quality Surat textile cluster.

Prepared by Ram Asrey Lal, Dy Director (Chemical Processing), under the guidance of the Textile Commissioner, Mumbai and material based on :

- i) Report prepared by Regional Office of the Textile Commissioner, Ahmedabad
- ii) Discussion with Shri Girish Luthra, a dynamic entrepreneur, environmentalist, industrialist and pro-active thinker.
- iii) Discussion with Association, technicians and industry's representatives at Surat
- iv) Various Websites