



## PROJECT REPORT ON SURGICAL ABSORBENT COTTON

PRODUCT : **SURGICAL ABSORBENT COTTON.**

QUALITY & STANDARDS : As per Customer's specification.

PRODUCTION CAPACITY (P.M.) :       Quantity       :       300 M. T.  
  Value (Rs.)       :       21.47 Lakhs

MONTH & YEAR OF PREPARATION :   May, 2020.

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## **SURGICAL ABSORBENT COTTON**

### **1. INTRODUCTION**

Absorbent Cotton is also known as Surgical Cotton or Cotton Wool and mainly used for medical purposes in hospitals, nursing homes, dispensaries and at home (for first aid) etc. because of its property of high fluid absorbency, it is better known among masses as absorbent cotton. The raw cotton is processed by series of steps which render the cotton hydrophilic in character and free from external impurities needed to be fit for use in surgical dressings and personal hygiene. Apart from medical purposes absorbent cotton is also used for making conventional type of sanitary napkins or pads. Fairly good quality of absorbent cotton is also used for removing make-up and dirt at beauty parlours.

### **2. MARKET POTENTIAL:**

The demand of Surgical Absorbent Cotton is directly related with the increase in population and expansion of public health services. The demand for Surgical Absorbent Cotton increases with the increase in population and number of hospitals, dispensaries, nursing homes, health care centers etc. Progressive increase in health amenities offered by Government and coming up of new hospitals and health care centres in private sector even at small towns are contributing to the growth of absorbent cotton industry. Government hospitals and large nursing homes are the largest consumer for cotton wool.

With the development of medical facilities and growing awareness towards personal hygiene, the surgical absorbent cotton industry registered steady growth rate in past and is picking up pace with the spread of education and upward economic growth of towns and

villages.

**3. BASIS AND PRESUMPTIONS:**

1. The estimates are drawn for a production capacity generally considered Techno- economically viable for model type of activity.
2. The costs in respect of land and building, machinery & equipments, raw materials and the selling prices of the finished product etc. are those generally prevailing at the time of preparation of the project profile and may vary depending upon various factors from place to place and time to time.
3. The production capacity is based on single shift working for 300 working days per annum.
4. Where as some names of manufacturers / suppliers of machinery and equipments, raw materials are indicated at the end of the profile, these are by no means exclusive or exhaustive.

**4. IMPLEMENTATION SCHEDULE :**

Every project requires some specific time for commercial production and are briefly as under:-

Sl. No.	Activity	Expected time
1.	Selection of Site	0-1 months
2.	Preparation of Project Report	1-3 months
3.	Provisional Registration	1 week
4.	Financial Arrangements	3 – 6 months
5.	Construction of Building & Working Shed.	3 – 6 months
6.	Procurement of Machinery	3-5 months
7.	Installation, electrification and commissioning of machinery and other facilities	1-3 months
8.	NOC from Pollution Control Board	1- 2 months

Some of the steps mentioned above will work simultaneously, hence total time for the complete operation of project may taken 5 – 6 months.

## 5. TECHNICAL ASPECTS

### i) Production detail & Process of Manufacture:

The process of manufacturing consists of various steps, as follows:

#### a) **Opening and cleaning of Raw Cotton:**

Raw cotton received in bale or otherwise is opened in opener where it is loosened and simultaneously dust / foreign particles are also removed. Loosened cotton is then put into a keir where chemicals such as caustic soda, soda ash, detergent, etc. are added along with adequate water and steam boiled for about 3- 4 hours. By this process most of the natural waxes and oils are removed while remaining foreign matter get soften and disintegrated. The treated cotton is transferred to washing tanks where it is washed thoroughly.

#### b) **Bleaching:**

Washed cotton is bleached to remove brownish colour developed due to chemical treatment. Bleaching is done by using bleaching agent such as sodium- hypochlorite or hydrogen peroxide. The bleaching process improves whiteness, wetting properties and assists in disintegration of any remaining foreign materials.

#### c) **Removal of Chemicals:**

The bleached cotton is thoroughly washed again to remove the chemicals. A little quantity of dilute hydrochloric acid or sulphuric acid is also added to neutralize excess alkali. If required, again washed with water. The water of cotton is removed with the help of hydro-extractor. It is then sent to a wet-cotton opening machine.

#### d) **Drying:**

The cotton so obtained is dried by passing through dryer or alternatively subjected to sun drying where provision for dryer is not there.

#### e) **Lapping:**

The dried cotton is sent to blower room where it is thoroughly opened and made into laps.

**f) Carding:**

The laps are then fed into carding machine wherein cotton is warped around rollers in thin layers.

**g) Rolling:**

Cotton so obtained is compressed and rolled into suitable role size along with packaging paper.

**h) Weighing and cutting:**

The rolls are then weighed and cut according to required weight and sizes and labeled properly before packing in polythene sheets and heat sealed.

**ii) Quality Control & Specification:**

This item is covered under Drug Control Act. Hence, it should be manufactured to meet its requirements.

**iii) Production Capacity ( per annum )**

- a) Quantity : 300 M.T.
- b) Value (Rs.) : Rs. 21.47 lacs.

**iv) Motive Power Requirement:**

The total connected load of the unit is approx. 120 KWH on assuming 60% utilization of connected load.

**v) Pollution Control:**

NOC from Pollution Control Board is necessary to be obtained before starting the industrial activity. Suitable equipments are to be provided to check the harmful and non-permissible contents in the effluent. Hence, effluent water may be treated suitably to remove harmful contents before discharging the effluent.

vi) **Energy Conservation:**

Suitable provisions like shunt capacitor for electric motors, thermal insulation, etc. are required to save energy. All energy devices are required to be used with care and judiciously.

**6. FINANCIAL ASPECTS:**

**(A) Fixed Capital:**

**i) Land and Building :**

Land	550 Sq. Mtrs.	Rs. 30,00,000/-
Total Built up Area		Rs. 25,00,000/-

(Working Shed, Office, Stores etc.)450 Sq. Mtrs.

**Total: Rs. 55,00,000/-**

**ii) Machinery and Equipment :**

Sl. No.	Description	Qty (Nos.)	Value (Rs.)
1	High pressure Keir(MS) inside coated with acid resistant epoxy coating, fitted with pump, steam pipe, capacity 2000 kgs. Charge of cotton with all accessories	1	1,70,000/-
2	Carding machine (Revolving flat high production) 1016 mm width with dust extruder, electronic stop motion, brush rolls, stripping brush rolls and other accessories.	2	7,50,000/-
3	Two compartment continuous cotton dryer with steam heating arrangements at 100 psi provided with trolley, electrical heaters and electric control panel	2	6,60,000/-
4	Porcupine cleaners 1200 mm working with 406 mm diporcupine type cylinder with strikers having two striking edges, centrally adjustable grid bars and reduction gear, electric motor(5 HP) for materials transport with	2	2,50,000/-

	accessories.		
5	Centrifugal Hydro-extractor with S.S. Basket dia 1000 mm fitted with motor and other accessories	1	90,000/-
6	Wet cotton opener working width 1000 mm fitted with motors and accessories	1	48,000/-
7	Vertical opener with 7 steel discs and three separate centrally adjustable settings for beater and grid bars fitted with motor 5 HP complete with accessories	1	1,00,000/-
8	Single souter and lap machine 1065 mm working width with Kirschener beater, centrally adjustable grid bars, high pressure device for loading calendar rollers and lap racks, etc. for making lap holder for continuous operations with 10 HP motor starter etc.	2	6,50,000/-
9	Rolling and winding machine 1320 mm on face, complete with motor starter and other accessories	2	60,000/-
10	Small band saw type machine with motor for rolls cutting	2	17,000/-
11	Air compressor for lapping machine	1	13,000/-
12	Coal/wood fired boiler 1000 kg/ hrs. Evaporation capacity, 50 psi complete with feed pump and accessories	1	1,95,000/-
13	Water overhead tank of 10,000 liters capacity and tube well fitted with accessories	L.S .	80,000/-

1 4	Water treatment plant for treating process water required for boiler and keir	L.S .	85,000/-
1 5	Water and pipe connection with insulation, various M.S. tanks and concrete tanks for washing purpose etc.	L.S .	47,000/-
1 6	Weighing scale, sealing machine and balancing equipments	-	5,000/-
1 7	Testing equipments such as pH meter, Soxhlet-extractor, chemical balance, crucibles, furnace, oven, etc.	-	1,20,000/-
1 8	Electrification and installation charges	-	3,00,000/-
1 9	Pollution Control and Energy Conservation equipments.	-	1,50,000/-
<b>Total</b>			<b>37,90,000/-</b>
<b>iii) Office Furniture &amp; Equipments</b>			<b>50,000/-</b>

<b>iv) Pre-operative Expenses</b>	30,000/-
<b>Total: (i + ii + iii + iv)</b>	<b>46,45,000/-</b>

**(B) Working Capital (Per Month): (Recurring Expenses) ( per month )**

**i) Staff and Labour ( per month) ( in Rs.)**

Sl. No.	Designation	No.	Total Salary
1	Manager	1	10,000/-
2	Chemist	1	8,000/-
3	Clerk – cum – Accountant	1	5,000/-
4	Supervisor	1	5,000/-
5	Storekeeper	1	4,000/-
6	Blow Room Operator	1	4,000/-
7	Boiler Attendant	1	4,000/-
8	Skilled Worker	20	70,000/-
9	Unskilled Worker	34	1,02,000/-
10	Packers	5	15,000/-
11	Peon – cum – Watchman	1	3,000/-
<b>Sub- Total</b>			<b>2,30,000/-</b>
<b>Perquisites @ 15%</b>			34,500/-
<b>Total</b>			<b>2,64,500/-</b>

**ii) Raw Material:**

Sl. No.	Particulars	Quantity (Kg.)	Rate (Rs./Kg.)	Value (Rs.)
1	Raw Ginned Cotton	27,500	32	8,80,000/-
2	Caustic Soda	850	18	15,300/-
3	Soda Ash	550	11	6,050/-
4	Bleaching Agent	550	6.5	3,575/-
5	Misc. Chemicals	LS	-	26,000/-
6	Packing paper, labels, Gum, Polyethylene sheets, sacks, etc.	LS	-	50,000/-
<b>Total</b>				<b>9,80,925/-</b>

**iii) Utilities:**

Sl. No.	Particulars	Quantity	Rate	Value (Rs.)
1	Coal for boiler	45 MT	1,800 /MT	81,000/-
2	Electricity	17,000 KWH	4.5/KWH	76,550/-



<b>Total</b>	<b>1,57,500/-</b>
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**iv) Other Contingent Expenses:**

Sl. No.	Description	Amount in Rs.
5.	Postage and stationery	1,000 /-
6.	Telephone	1,000/-
7.	Sales Expenses	15,000/-
8.	Transport	10,000/-
9.	Consumable Stores	3,000/-
10.	Repair & Maintenance	2,500/-
11.	Insurance	1,500/-
12.	Misc. expenditure	1,500/-
<b>Total :</b>		<b>35,000/-</b>

**v) Total Recurring Expenses.**

	Amount in Rs.
a. Salary & Wages	2,64,500/-
b. Raw material	9,80,925/-
c. Utilities	1,57,500/-
d. Other contingent expenses	35,000/-
<b>Total: :</b>	<b>14,37,925/-</b>

**Total Working Capital for 3 months = Rs. 14,37,925/- X 3 = Rs. 43,13,775/-**

**7. Total Capital Investment:**

	Amount in Rs.
a) Fixed Capital	46,45,000/-
b) Working Capital for 3 months	43,13,775/-
<b>Total:</b>	<b>89,58,775/-</b>

**Machinery Utilization:**

Extrusion process will be taken as the bottle neck operation for this project.

**8. Financial Analysis:**

**(A) Cost of production (Recurring Expenses) ( per annum )**

S. No.	Particulars	Amount (Rs.)
1.	Total Recurring Expenditure	1,72,55,100/-
2.	Depreciation on Machinery & Equipments @ 10%	3,79,000/-
3.	Depreciation on office furniture and equipments @ 20%	10,000/-
4.	Depreciation on Building @ 5%	25,000/-
5.	Interest on Total Capital Investment @ 15%	13,43,816/-
	<b>Total :</b>	<b>1,90,12,916/-</b>

**(B) Turnover (per annum)**

**Sales proceeds as shown below:**

Item	Quantity (M.T.)	Rate (Rs.)	Value (Rs.)
Absorbent Cotton	300 MT	Rs. 71000/- MT	2,13,00,000/-
Cotton Waste	25 MT	Rs. 7000/-MT	1,75,000/-
Total:			<b>2,14,75,000/-</b>

**(C) Net Profit (Per Annum):**

Turn Over	(-) Cost of Production	<b>Rs. 24,62,084/-</b>
2,14,75,000/-	(-) 1,90,12,916/-	

**(D) Net Profit Ratio (Per Annum):**

<u>Profit/annum X 100</u>	<u>24,62,084/- X 100</u>	=	<b>11.46%</b>
Sales Per Annum	2,14,75,000/-		

**(E) Rate of Return:**

<u>Profit/Annum X 100</u>	<u>24,62,084/- X 100</u>	=	<b>27.48%</b>
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Total Capital Investment 89,58,775/-

**BREAK EVEN POINT:**

**Fixed Cost (Per Annum):** **Amount in Rs.**

1.	Depreciation on Machinery & Equipments, Building, Office Equipments	4,14000/-
2.	Interest on Total Investment @ 15%	13,43,816/-
3.	40% salary and wages	12,69,600/-
4.	40% of other expenses	1,68,000/-
5.	Insurance	18,000/-
	<b>Total Fixed Cost:</b>	<b>32,13,416/-</b>

**Break Even Point:**

$$\frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Profit}} = \frac{\text{Rs. } 32,13,416/- \times 100}{\text{Rs. } 32,13,416/- + \text{Rs. } 24,62,084/-}$$

=56.61%

**9. Names and Addresses of Plant & Machinery Suppliers: Carding**

**Machine:**

1. M/s. National Machinery Manufacturers Ltd.,  
P.B. No. 3, Thane – 300 601.
2. M/s. Ramesh Safe and Carding Works, Station Road,  
Panipat(Haryana)
3. M/s. Machinery Manufacturers Corporations,  
B- 61, Circular Garden Road, Kolkata – 600 043.

**Keir, Boiler, Hydro-extractor/Other Machinery:**

1. M/s. Gujarat Machinery  
Manufacturers Ltd., 187, Worli,  
Mumbai – 400 018.

2. M/s. APV Engg. Co.  
Ltd., Jessore Road,  
Kolkata.
3. M/s. Bery Bros. Industries,  
6, Orion Engg. Works, Mumbai.
4. M/s. Associated Textile Engineering,  
Forbes Street, Fort, Mumbai,
5. M/s. Textile Machinery  
Corporation Ltd., 103, Brabourne  
Road, Kolkata.
6. M/s. Wanson India(P) Ltd.,  
10 A, Horington Street, Kolkata.
7. M/s. Rajesh Engineering Works,  
Asian Chemical Compound, Subhash Nagar, Jogesswari(E) , Mumbai.
8. M/s. Anu Designers and Fabricators,  
C – 1/12, GIDC Estate Opp. Ambikanagar Society, Odhav.  
Ahmedabad. (Gujrat).

## 10. Names and Addresses of Raw Material

### Suppliers: Ginned Cotton:

1. From Cotton Traders or locally available sources

### Chemicals:

1. M/s. United Trading Company,  
Desh Bandhu Gupta Marge,  
New Delhi – 110 005. 12/56,  
Karol Bag,
2. M/s. Vikas Chemicals,  
Bazar, Delhi 110 006. Tolak
3. M/s. Continental Chemicals,

M-67, Street No. 4, Shastrinagar, Delhi- 110 006.

4. M/s. Navin Enterprises, 153,  
Chandra Bala Estate, Building No. 2, Flat No. 4, 30<sup>th</sup>  
Road, Bandra, Mumbai – 400 050.
5. M/s. Gujrat Industrial Chemicals Corporation, 37/39,  
S.S. Gaikwad Marg, Dhobhi Talao, Mumbai – 400 002.

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