

## ***Project Profile***

- 1. Product : Absorbent Cotton***
- 2. Production Capacity : 150 M.T. per Annum***
- 3. Month & Year of Preparation : August, 2011***
- 4. Prepared by :***

***Chemical Division  
Government of India  
Ministry of Micro, Small & Medium Enterprises  
MSME-Development Institute  
C.G.O. Complex, Block “C”, Seminary Hills  
Nagpur – 440006 (M.S.)  
Tel. No. (0712)2510046, 2510352, Fax No.2511985  
E – mail : [dcdi-nagpur@dcmsme.gov.in](mailto:dcdi-nagpur@dcmsme.gov.in)  
Visit us at : [www.dcmsme.gov.in](http://www.dcmsme.gov.in) , [www.msmedinagpur.gov.in](http://www.msmedinagpur.gov.in)***

## **1. INTRODUCTION OF THE PRODUCT :**

*Absorbent Cotton also known as “Surgical Cotton” or “Cotton Wool” is made from well carded cotton fibers. It is bleached to get good white colour and softened. The sterilized absorbent cotton may be of slightly white in colour. The material should be of uniform quality and offer appreciable resistance when pulled. The average staple length of absorbent cotton is not less than 1.5 cm. It is called absorbent cotton as it absorbs fluids immediately. It should be soft in order to give maximum protection to the wound irritation. The main physical properties desired in a surgical dressing are inertness and lack of irritation during use. Absorbent Cotton provides these properties when manufactured according to certain standards. Raw Cotton is processed by a series of process and rendered hydrophilic in character and free from other external organic impurities for enabling it's use in surgical dressing.*

*The use of absorbent cotton started several decades before the growth of this industry, but it gained wider market along with the development of medical facilities in the country after independence. The successive five year plans provided for medical facilities such as construction of hospitals and dispensaries even in villages. Further more growing awareness amongst professionals in the use of hygienic materials increased the demand for absorbent cotton which is also extensively used for making sanitary pads or napkins or filters.*

## **2. PLANT CAPACITY PER ANNUM : 150 M.T. per Annum.**

## **3. MARKET & DEMAND ASPECTS :**

*Demand for Absorbent Cotton depends on various factors. It increases directly with increase in population and number of hospitals, dispensaries, health centers, clinics etc. Health amenities are offered by Government progressively every year by providing hospitals / dispensary facilities even at remote places. Absorbent Cotton is also used for making sanitary towels, filters etc. Government hospitals are the biggest consumers of absorbent cotton. The absorbent cotton is sold mostly through medical stores to private hospitals, clinics etc. whereas the purchase of absorbent cotton for Government hospitals is by calling tenders or through Government agencies.*

*It has excellent market abroad. It is exported to the countries like Japan, Australia and other European countries.*

## **4. BASIS AND PRESUMPTIONS :**

- a. The estimates are drawn for a production capacity generally considered techno-economically viable for model type of manufacturing activity.*
- b. The scheme is based on single shifts of 8 hours per day and 300 working days per annum.*

- c. *The interest rate on the borrowed capital has been taken as 13 % per annum.*
- d. *The cost in respect of Raw Materials, Packing Materials, Machinery & Equipments has been taken at the time of preparation of project profile and may vary from place to place and time to time.*
- e. *The rental Value of production shed is taken as per the prevailing rates and and may vary from place to place and time to time.*
- f. *The plant capacity utilization has been taken as 70 % for calculation purposes.*

## **5. IMPLEMENTATION SCHEDULE :**

*The project implementation will take about nine months. The break-up of activities with relative time for each activity is as follows:*

<b>Sr. No.</b>	<b>Activity</b>	<b>Estimated Time Period (Months)</b>
(i)	<i>Scheme preparation &amp; approval</i>	<i>0 – 1</i>
(ii)	<i>Registration under MSME Act 2006</i>	<i>1 - 2</i>
(iii)	<i>Clearance from Pollution Control Board</i>	<i>2 - 5</i>
(iv)	<i>Sanction of loan</i>	<i>2 - 5</i>
(v)	<i>Approval from Food &amp; Drugs Administration</i>	<i>3 - 5</i>
(vi)	<i>Power Connection</i>	<i>4 - 6</i>
(vii)	<i>Placement of Orders for Machines</i>	<i>5 - 6</i>
(viii)	<i>Installation of Machines</i>	<i>7 - 8</i>
(ix)	<i>Recruitment of Staff &amp; Trial run</i>	<i>8 – 9</i>
(x)	<i>Commercial Production</i>	<i>9<sup>TH</sup> onwards.</i>

## **6. TECHNICAL ASPECTS :**

a. **PRODUCTION CAPACITY** : **150 MT P.A.**

b. **QUALITY CONTROL & STANDARDS** :

*This item is covered under drug act and as such it should be manufactured as per Indian Pharma (I.P.) or British Pharma (B.P.) specifications.*

c. **MANUFACTURING PROCESS :**

*The process of manufacture essentially involves the following operations :*

**(i) OPENING AND CLEANING:**

*Raw cotton in bale form is opened in Crighton opener, it is loosened and dust and other particles are removed. The cotton is then sent to Kier, where it is steam boiled for about 3 – 4 hours after adding chemicals such as Caustic Soda, Soda Ash, Detergents etc. This treatment removes much of natural waxes and oils and softens and disintegrates any foreign matter that may remain after cleaning operation.*

**(ii) WASHING:**

*After the cotton is boiled, it is removed from the Kier and sent to the tanks for washing.*

**(iii) BLEACHING:**

*The washed cotton is not of good colour. It is therefore bleached with chemicals such as Hydrogen Peroxide or Sodium Hypochlorite. The bleaching not only whiten the colour but also improves its wetting properties and assists in disintegration of any remaining foreign materials.*

**(iv) ALKALI REMOVING:**

*The bleached cotton is thoroughly washed again to remove the chemicals. A small quantity of diluted sulfuric acid is also added to neutralize excess alkali. The cotton is then passed through hydro extractor to remove water. It is then sent to a wet cotton opening machine.*

**(v) DRYING:**

*The cotton so opened is then passed through drier. Where drying machine is not there, the cotton is subjected to sun drying. This method however restricts the capacity of the unit besides the cotton getting mixed up with the dust.*

**(vi) LAPPING:**

*After the cotton is dried, it is again sent to the blow room, where it is thoroughly opened and made in to laps.*

**(vii) CARDING:**

*The laps are then fed in to the carding machine, where cotton comes in to thin layers.*

**(viii) ROLLING:**

*Here paper is inserted under the laps and the cotton is rolled and simultaneously compressed.*

**(ix) WEIGHING & CUTTING:**

*The rolls are then weighed according to the required size. The cut rolls are then further packed in a polythene roll after labeling and putting the weight mark and then send for final packing.*

**LEGAL ASPECTS:**

*The item is covered under drug act and therefore license for this product is compulsory. This license can be obtained from the office of the Joint Commissioner, Food & Drugs Administration situated in almost each district. The general requirements for obtaining license are as under :*

- i) Land & Plant Layout*
- ii) Proof of Ownership of land or consent letter of owner, if the land is taken on rent, as the case may be.*
- iii) Copy of memorandum of articles of association or partnership deed, list of Directors etc. as the case may be.*
- iv) Photocopy of the packing material specimen.*
- v) Clearance from State Pollution Control Board / Department.*
- vi) Copy of registration of the Enterprise under MSME Act 2006.*

**7. FINANCIAL ASPECTS :**

<b>Sr. No.</b>	<b>Description</b>	<b>Quantity</b>	<b>Value ₹</b>
<b>(a)</b>	<b>Land &amp; Building</b> <i>Total 1000 Sq. Meters on rent</i>	<i>L.S.</i>	<i>15,000</i>
<b>(b)</b>	<b>Machinery &amp; Equipments</b>		
<i>(i)</i>	<i>Willow / Opener Machine</i>	<i>1 No.</i>	<i>16,000/-</i>
<i>(ii)</i>	<i>Kier Compartment</i>	<i>1 No.</i>	<i>1,80,000/-</i>
<i>(iii)</i>	<i>Wet Cotton Opener</i>	<i>1 No.</i>	<i>36,000/-</i>
<i>(iv)</i>	<i>Hydoextractor</i>	<i>1 No.</i>	<i>65,000/-</i>
<i>(v)</i>	<i>Drying Chamber</i>	<i>1 No.</i>	<i>3,28,800/-</i>
<i>(vi)</i>	<i>Racking Tesure Machine</i>	<i>1 No.</i>	<i>57,600/-</i>
<i>(vii)</i>	<i>Finisher, Scripture with Lap Former</i>	<i>1 No.</i>	<i>3,34,800/-</i>
<i>(viii)</i>	<i>Cardest Heavy Duty Semi high speed</i>	<i>1 No.</i>	<i>1,56,000/-</i>
<i>(ix)</i>	<i>Packing Machine</i>	<i>1 No.</i>	<i>22,200/-</i>
<i>(x)</i>	<i>Circular Cutting Machine</i>	<i>1 No.</i>	<i>11,000/-</i>
<i>(xi)</i>	<i>Carding Machine</i>	<i>1 No.</i>	<i>24,000/-</i>
<i>(xii)</i>	<i>Coal Fired Boiler ( Cap:750 Kg./ hour)</i>	<i>1 No.</i>	<i>2,75,000/-</i>
<i>(xiii)</i>	<i>Testing Equipments, weighing scale, chemical balance, pH meter, Soxhlet extractor, Crucible, Furnace etc.</i>	<i>L.S.</i>	<i>60,000/-</i>

(xiv)	Office Equipment & Furniture	L.S.	50,000/-
		<b>Sub-Total</b>	16,16,400/-
(xv)	Electrification & Installation charges @ 10% of the cost of Machinery & Equipments		1,61,640/-
(xvi)	Preoperative Expenses	L.S.	25,000/-
		<b>Total</b>	<b>18,03,040/-</b>
		<b>Or say</b>	<b>18,03,000/-</b>

**(c) Raw Materials per Month :**

Sr. No.	Description	Quantity	Value ₹
(i)	Raw Ginned Cotton @ ₹ 42.50 per Kg.	7700 Kg.	3,27,250/-
(ii)	Comber or Mill Waste Cotton @ ₹ 39.60 Kg.	2800 Kg.	1,10,880/-
(iii)	Soda Ash @ ₹ 22.00 per Kg.	875 Kg.	19,250/-
(iv)	Caustic Soda @ ₹ 25.60 per Kg.	1260 Kg.	32,256/-
(v)	Bleaching Agents ₹ 41 per Kg.	875 Kg.	35,875/-
(vi)	Wetting Agents i.e. Lisapol etc.	L.S.	<b>12,000/-</b>
(vii)	Packing Materials viz. Paper , Gunny Bags, Gum, Labels etc.	L.S.	<b>58,000/-</b>
		<b>Total</b>	<b>5,95,511/-</b>

**(d) Salary & Wages per Month :**

Sr. No.	Description	Quantity	Value ₹
(i)	Manager/Chemist	1 No.	7,000/-
(ii)	Technical Assistant	1 No.	5,000/-
(iii)	Skilled Worker	5 Nos.	20,000/-
(iv)	Unskilled Workers	8 Nos.	20,000
(v)	Accountant	1 No.	5,000/-
		<b>Total</b>	<b>57,000/-</b>

**(e) Utilities per Month :**

Sr. No.	Description	Quantity	Value ₹
(i)	Power @ ₹ 5.50 per unit	10,000 Kwh	55,000/-
(ii)	White Coal @ ₹ 2500 per MT	30 MT	75,000/-
(iii)	Water & Water Treatment Chemicals	L.S.	7,000/-
			<b>1,37,000/-</b>

**(f) Other Expenses per Month :**

Sr. No.	Description	Quantity	Value ₹
(i)	Rent	L.S.	15,000/-
(ii)	Postage & Stationery	L.S.	1,000/-

(iii)	Telephone	L.S.	2,000/-
(iv)	Repair & Maintenance	L.S.	5,000/-
(v)	Insurance @ 2% of the cost of Machinery & Equip.		2,700/-
(vi)	Marketing & Travelling Expenses	L.S.	10,000/-
		<b>Total</b>	<b>35,700/-</b>

(g)	Working Capital for One Month (c+d+e+f)	:	₹ 8,25,211/-
(h)	Working Capital for three Months	:	₹ 24,75,633/-
		<i>Or say</i>	:
(i)	Total Capital Investment(b+h)	:	₹ 42,79,000/-

## 9. FINANCIAL ANALYSIS :

### (a) Cost of production per Annum :

Sr. No.	Description	Value ₹
(i)	Raw Materials	71,46,132/-
(ii)	Salary & Wages	6,84,000/-
(iii)	Utilities	16,44,000/-
(iv)	Other Expenses	4,28,400/-
(v)	Depreciation on Machinery & Equipments @ 10% p.a.	1,61,640/-
(vi)	Interest on borrowed capital @ 13 % p.a.	5,56,270/-
	<b>Total</b>	<b>1,06,20,442/-</b>
	<b>Or say</b>	<b>1,06,20,000/-</b>

### (b) Turnover per Annum :

Sr. No.	Description	Value ₹
(i)	105 MT of Absorbent Cotton @ ₹ 1,15,000 per MT	1,20,75,000/-

### (c) Net Profit per Year :

$$\begin{aligned}
 \text{Net Profit} &= \text{Total turnover} - \text{Total cost of production} \\
 &= ₹ 1,20,75,000 - ₹ 1,06,20,000 \\
 &= ₹ 14,55,000
 \end{aligned}$$

(d) **Profit Ratio on Sales :**

$$\begin{aligned}\text{Profit Ratio on Sales} &= \frac{\text{Net Profit}}{\text{Total turnover}} \times 100 \\ &= \frac{14,55,000}{1,20,75,000} \times 100 \\ &= \mathbf{12.04 \%} \\ &\quad \# 9 \# \end{aligned}$$

(e) **Rate of Return (ROR) on Total Capital Investment:**

$$\begin{aligned}\text{ROR} &= \frac{\text{Net Profit per annum}}{\text{Total Capital Investment}} \times 100 \\ &= \frac{14,55,000}{42,79,000} \times 100 \\ &= \mathbf{34.0 \%} \end{aligned}$$

(f) **Break Even Analysis :**

(i) **Fixed Cost :**

<b>Sr. No.</b>	<b>Description</b>	<b>Amount (Rs.)</b>
01.	Depreciation on Machinery & Equipments @ 10% p.a.	1,61,640/-
02.	Interest on Total Capital Investment @ 13% p.a.	5,56,270/-
03.	40 % of Salary & Wages	2,73,600/-
04.	40 % of Other Expenses	1,71,360/-
	<b>Total</b>	<b>11,62,870/-</b>
	<b>Or say</b>	<b>11,63,000/-</b>

(ii) **Break Even Point (B.E.P.) :**

$$\text{B.E.P.} = \frac{\text{Fixed Cost}}{\text{Fixed Cost} + \text{Profit}} \times 100$$



$$= \frac{11,63,000}{11,63,000 + 14,55,000} \times 100$$

$$= 44.42 \%$$

# 10 #

***Name and Addresses of Plant and Machinery Suppliers:***

1. *M/s. M/s. Talwandi Technicals, Teka – Naka, Shende Nagar, Kamptee Road, Nagpur – 440 026 (Maharashtra). Mb.91-9822644488.*  
Web site : [www.talwanditechnicals.com](http://www.talwanditechnicals.com)
2. *M/s. Brown & Company, 46, Nethaji Nagar, Nanjundapuram Road, Coimbtore, Tamilnadu – 641 036. Tel. No.(0422)2315533,*  
Website: [www.spinningspareparts.com](http://www.spinningspareparts.com)
3. *M/s. Sri Amman Textile Industries, 392, Rajaji Nagar, Opposite Syndicate Bank,*  
*Kuniamuthur, Coimbtur, Tamilnadu – 641 008.*  
*Tel.(0422)2251995, Mb>09944633486, 09345061258*  
Website: [www.sriamman-textile-industries/machinery-spare-parts.html](http://www.sriamman-textile-industries/machinery-spare-parts.html)
4. *M/s.K.B.Engineering Works, 271/2,Industrial Area-2, Near Lucky Dhram Kanta, Ludhiana, Punjab – 141 003. Tel.(0161)5089425, Mb.09872819762*  
Web site : [www.kb-engineering-works/spare-parts.html](http://www.kb-engineering-works/spare-parts.html)

**Boilers:**

5. *M/s. Ross Boilers, 33, Burhani Industrial Estate, Kondhwa Bhudruk, Pune – 411 037. Tel. No. 020 - 24269393, 24272293, Fax No.020 – 24269562*  
*Mb. No. 09822012844, 09922433674, Web site : [www.rossindia.com](http://www.rossindia.com)*
6. *M/s. Micro Dynamics Pvt. Ltd., T – 181 – 1/A, MIDC Bhosari, Pune – 411 026.*  
*Tel. No.020-27120839 / 30685454, Fax No. 020 – 30685466,*  
*Mb:09371313151.*  
Web site : [www.indiamart.com](http://www.indiamart.com)

**White Coal :**

7. *M/s. Hadoti Biotech Pvt. Ltd., Spl. 3(1) Chambal Industrial Area, Opp. Multimetals, Kota. (Rajasthan) – 324 004, Contact Person: Mr. Shankar Lal Mittal, Phone No. 0744-2209807, Fax No. 0744-2481990, Mob. No. 09414189139 /09413351815, Web : [www.hadotiboitech.com](http://www.hadotiboitech.com) E-mail ID: [hadotibiotech@rediffmail.com](mailto:hadotibiotech@rediffmail.com)*
8. *M/s. Havisha Biotech, 301 Oasis Complex, Opp Ankur High School, Ahmedabad(Gujarat) – 380 007, Telephone – 079-65220205, Fax: 079-30009780  
Contact person: Ms. Dhruvi S., Mob. No. 9898003339,  
Web: [www.havishachemcom](http://www.havishachemcom)*
9. *M/s. Bhakti Bio Coal Engery, A-56, MIDC Katol, Dist. Nagpur (Maharashtra).  
Contact Person : Shri Ramarao Kadu Mb: 09423677519.*

***Name and Addresses of Raw Material Suppliers:***

***Cotton :*** Locally available but cotton from North India is preferred.

***Chemicals:***

1. *M/s. Triveni Chemicals,135,Pancharatna Char Rasta, G.I.D.C., Vapi -396 195 (Gujrat).Tel 91-260-6618618,91-260-6618624, Mb. 91-9227788155.  
Website : [www.trivenichemical.com](http://www.trivenichemical.com)*
2. *M/s. B.K.Chemicals, B-2, Shruti Apartment, 1<sup>st</sup> Floor, Near Century Enka, Colony No.2, Pune – Nasik Highway, Bhosai, Pune- 411 039 (Maharashtra).  
Tel.91-20-27111941, Mb:91-9371020040, 91-9881418345.  
Website : [www.bkchemicals.in](http://www.bkchemicals.in)*
3. *M/s. Surya Fine Chem, C/102, Sai Grece, Near Eagle Hotel, PCMC Link Road, Near Petrol Pump,Pune – 411 033 (Maharashtra).  
Tel. 91-20-65103846, Mb.91-9890443743  
Website : [www.suryafinechem.com](http://www.suryafinechem.com)*
4. *M/s. Swastik Acids & Chemicals,Budhwari, Nagpur – 44 002  
Tel.(0712)2763548, 2764908*

-----

-----