

SURGICAL BANDAGE

INTRODUCTION

Surgical Bandage is the products manufactured from white bleached cotton gauge cloth of suitable quality. Absorbent cotton also known as surgical cotton is used mainly for medical purposes. Raw cotton is purified by a series of processed and rendered hydrophile in character besides rendering it free from other external organic impurities. Purified cotton is made from superior grade cotton fibers. It is bleached to pure white colour, softened and freed from pieces of thread, leaf, shell, fiber, dust and other organic matters. The absorbent cotton when impregnated with capsicum celnrsin and methyl salicylate gives capsicum cotton/wool which can be used as counter irritant and in the treatment of rheumatic producing heat on undamaged skin.

With the establishment of large number of primary hospitals and rural health centers, the demand for surgical bandages has increased considerably. This item is regulated under the drugs Control Act and a manufacturing license under the provision of the act, will have to be obtained. There is good scope for new investment. New entrepreneur may venture in to this field keeping in mind to face the marketing competition.

ABOUT THE PRODUCT

Surgical bandage are the products manufactured from white bleached cotton gauge cloth of suitable quality. Surgical bandage come in roll form in length of 3 to 4 meter. Surgical Cotton also known as absorbent cotton wool or purified cotton is used at large in surgery as a dressing material for burns & wounds as a cotton bedding for maintaining a uniform temperature in inflamed parts and therefore finds applications in hospitals, dispensaries, nursing homes, etc. Good quality absorbent cotton is characterized by its uniform quality.

MARKET POTENTIAL

Surgical cotton industry is mainly limited to small and cottage scale units. Bengal Chemical & Pharmaceutical Works Ltd. is the key manufacturer of surgical cotton and bandages. Absorbent cotton also known as surgical cotton is used mainly for medical purposes. There is an increasing demand for this item in India and has good market possibilities. Absorbent cotton or medical cotton is used by Doctor, Dentists, and Industrial safety organizations in Hospitals and for individuals for first aid and home kits. At present the industry consist of around 136 units in the organized sector hence there is a good scope for new investment.

SUGGESTED CAPACITY

To assessing the proposed plant capacity due consideration is given on availability of raw materials, availability of electricity and market. The annual production of 2000 metre is suggested, the production at different capacity utilization per annum will be as follows:

Installed Capacity	1 st yr. production @80%	2 nd yr. onwards production @90%
Production Capacity 6 lakh metre per yr.	4.8 lakh metre per yr.	5.4 lakh metre per yr.
Production Capacity 2000 metre per day	1600 metre per day	1800 metre per day

Basis:-

No. of working days	=	25 days per month
	=	300 days per year
No. of shifts	=	1 per day.
One shift	=	8 hours
Effective working hours/day	=	7 hours

INFRASTRUCTURE REQUIREMENT

The main Infrastructural facilities required are:

Covered shed area (processing hall/storages/office)	1000 sq. ft.
Power requirement	10 kw.

RAW MATERIALS

The main raw material required is bleached cotton gauge cloth of suitable quality, conforming to IS-758/1925. The width of cloth ranges from 2.5 to 15 cm and length from 3 to 4 metre. This type of cloth is not being made in the north eastern region and would need to be procured from the Calcutta market. The annual requirement is estimated at 20 lakh metre for 100 per cent capacity utilization (assuming a loss of 10 per cent due to cutting and rejection). The consumables required are brown paper for packing to the extent of about 15,000 metre per year. The brown paper would be available from local market.

SUGGESTED LOCATION

In view the market the unit may be set up near by Guwahati surrounded by available market for raw materials, skilled manpower and as well as market for end product, location for setting up surgical cotton bandage making unit should be based in well developed road connectivity. In sikkim, Dist. H. Q. may be considered.

PRODUCTION PROCESS (STEP WISE)

The process of making bandage cloth involves:-

- Feed bandage cloth into a rolling machine,
- Rolling of cloth,
- Cutting into suitable width,
- Sterilization, and
- Packing.

PROJECT ECONOMICS

Total Capital Requirement

The total capital requirement including fixed capital and working capital is estimated at Rs 12.18 lakhs as follows. Of this, the project cost comprising fixed capital and margin money on working capital is Rs.10.58 lakhs.

A. Fixed Capital		(Rs. in lakhs)
Land	Own/Lease	
Land Development Cost		0.80
<u>Building /Civil works:</u>		
i)	Work shed 400 sq.ft	2.40
ii)	Office/Store 200 sq.ft.	1.60
iii)	Toilet/Bathroom/Cemented open space, Drainage facilities etc.	0.80
Plant & Machinery		1.98
Misc. Fixed Assets		1.00
	(Water arrangement/Overhead reservoir/pump set/power line connection/water & electrical fittings/office equipment)	
Preliminary & Pre-operative Expenses		0.60
Contingency provision		<u>0.40</u>
		<u>9.58</u>
B. Working Capital:		
Raw materials/ Packing materials	1 month	0.80
Working expenses	1 month	0.42
Finished goods	15 days	0.80
Receivable	7 days	<u>0.56</u>
		<u>2.60</u>

Note: Working capital to be financed as –

Margin Money	:	1.00
Bank Finance	:	<u>1.60</u>
		<u>2.60</u>

Means of Finance:

Promoter's Equity(25%)	:	2.58
Term Loan(75%)	:	<u>8.00</u>
		10.58

Cost of Production & Profitability:

(Rs in lakh)

Raw material/ packing materials& printed levels: 9.82		
Wages & Salaries	:	4.88
Utilities	:	0.30
Repair & Maintenance	:	0.15
Administrative overhead	:	0.25
Selling expenses 10% on sales		2.40
Depreciation	:	0.58
Interest	:	<u>1.20</u>
		<u>19.58</u>

Sales Turnover:

Taking an ex-factory price of Rs.5.00 per metre the annual sales realization for 4.80 lakhs metre would be Rs. 24.00 lakhs.

Break Even Analysis:

A.	<u>Variable Cost:</u>	(Rs in lakh)
	Raw material/ packing materials& printed levels	9.82
	Utilities	0.30
	Selling expenses	<u>2.40</u>
		<u>12.52</u>
B.	<u>Semi-Variable Cost:</u>	
	Wages & Salaries	4.88
	Repair & Maintenance	0.15
	Administrative overhead	0.25
	Depreciation	0.58
	Interest	<u>1.20</u>
		<u>7.06</u>
C.	Sales Realization	Rs. 24.00 lakhs
D.	Contribution	Rs. 11.48 lakhs
E.	Break-Even Point B/D x 80%	49%

Machinery & Equipment:

The main equipment required are –

Name of the M/C	No. of M/C required	Power required for each M/C	Value (Rs. in lakhs)
Cloth winding M/C	2	1 H.P	0.52
Roll & Bandage making M/C	2	Hand operated	0.12
Bandage Printing M/C	1	1 H.P.	0.40
Baby Electric Boiler	1	1 H.P.	0.48
Autoclave	1	-	0.18
Accessories/other items	-	-	0.10
Sub-total			1.80
Add. : Taxes, Insurance, Transport ,loading/ unloading etc			0.18
Total			1.98

Raw Materials/packing materials (Annually):

Item	Quantity	Rates(Rs)	Annual Requirement (Rs in lakh)
1. Bleached Gauge cloth	5.20 lakhs Mtrs.	1.85 /mtr.	9.62
2. Brown/white paper for Packaging	L.S.	-	0.20
TOTAL			9.82

Manpower:

Category	No.of person	Salary per person per month(Rs)	Monthly Salary Bill (Rs)
Chemist/Manager	1	8000	8000
Skilled worker	1	6000	6000
Semi-Skilled workers	1	5000	5000
Unskilled workers	2	3000	6000
Sales personnel	2	6000	12000
Total Manpower Cost			37,000

Salary Bill Rs 4.44 Lakhs + Benefits @ 10% annually i.e. Rs 0.44

Total Annual Salary Bill : Rs 4.88 Lakh.

Utilities:

Power for Machinery 5 H.P.
 General Lighting 10 H.P.
15 H.P

Electricity Bill (annual):

15H.P X 0.746 Kw X 6 hrs. X 300 days X Rs. 5.50

= Rs. 28,400

Water charges 1000 ltrs. per day (L.S.)

= Rs. 2,000

Rs. 30,400

Say Rs. 0.30 lakhs

Highlights:

The major highlights of the project are as follows:

Total Capital requirement	Rs.	12.18 lakhs
Promoter's contribution	Rs.	2.58 lakhs
Annual Sales realization	Rs.	24.00 lakhs
Annual Operating Expenses	Rs.	19.58 lakhs
Annual Profit	Rs.	4.42 lakhs
Return on sales		18%
Break-even point		49%
No. of person employed (Direct)		7

Addresses of Machinery suppliers/manufacturers

M/s Dadiwala Engg. Works,
 18, Industrial Area(D.L.F)
 Najafgarh Road,
 New Delhi

M/s Reliance Engg. Works.
 Municipal Industrial Estate
 2nd Floor, Gate no. 60,
 West Baptist Road
 Mumbai-400 008.

M/S Honest Machinery Works,
 Beri-Wali Gali
 Bara Hindu Road, Delhi.

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Addresses of machinery suppliers/manufacturers