

PROJECT PROFILE

ON

BOPP SELF ADHESIVE TAPES

Month & Year
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BOPP SELF ADHESIVE TAPES

INTRODUCTION:

The BOPP Adhesive Tapes are used for packaging. It is consumed daily in large quantities by all industrial and commercial organisations. From packing courier covers and bags to packing of pharmaceutical cartons, every where, the self adhesive tapes are consumed. The consumption increases in line with the improved standard of living and business activity in the society. Therefore the consumption of this product is bound to increase further.

PRODUCT USES & SPECIFICATIONS:

These tapes are used in electrical insulation purpose, in packaging, sealing and a various other general uses. These tapes are also used for general labelling with printing.

SPECIFICATIONS:

I.S.3434 - 1965 - Glossary of terms for adhesives and pressure sensitive tapes.

I.S.7809 (Part I) 1975 - General requirement for pressure sensitive tape.

I.S.7809 (Part II) 1977 - Test Methods.

I.S.7809 (Part III) 1977 - Requirement for individual materials. Plasticised polyvinyl adhesive tapes with non-thermo setting adhesives.

The BOPP tape must have smooth surface characteristics, good elongation, soft and flexible to give good conformability, transparency of pigmentation and temperature resistance.

MARKET POTENTIAL:

The Indian packaging industry is expected to grow to Rs 82,500 crore by 2015 from the current Rs 65,000 crore.

India stands at the 11th position in the world packaging industry, which is \$550-billion, and with the rising consumer demand and new technologies, it is

expected to grow at 18-20 per cent from the current 15 per cent, as per Indian Institute of Packaging (IIP).

Among the total packaging sources, plastic packaging is at 6.8 million tonne and growing at 20-25 per cent per annum, whereas paper packaging is 7.6 million tonne. Glass packaging contributes to 4-5 per cent and metal 8 per cent. Forty per cent of the total paper production goes for packaging.

Today, whatever we use needs a packaging. Last year, our GDP growth was 8.5 per cent while the packaging industry grew 15 per cent.

Indian Packaging Industry

- The market volume of the Indian packaging industry amounts to about Rs. 77,570 crore and has constantly grown by approximately 15 percent year on year.
- The pace of growth will accelerate to between 20-25 percent over the next five years.
- The highest demand for packaging and the associated equipment come from the food processing industry at 50 percent and from the pharmaceutical industry at 25 percent.
- The large growing middle class, liberalization and organized retail sector are the catalysts to growth in packaging. Also food and Pharma packaging are the key driving segments.
- The Indian food market is estimated to total about Rs. 8,82,350 crore according to the 'India Food Report 2008' published by Research and Markets.
- Food retail turnover is expected to grow from the current Rs 3,39,365 crore mark to 7,27,212 crore by 2025.
- The pharmaceutical industry is expected to average an annual growth of 16 percent till 2012.
- There are about 600-700 packaging machinery manufacturers, 95 percent of which are in the small and medium sector located all over India.

- Indian packaging machinery imports are around Rs 606 crore (20-25 percent) while the Indian packaging machinery exports are rapidly growing.
- Germany and Italy are the largest suppliers of packaging machinery to India but focus is now shifting on Taiwan and China.
- Indian companies are now placing increasing emphasis on attractive and hygienic packaging. This promises enormous potential for the future.

Packaging & Allied Industries – The South India Scenario

- Southern states including Andhra Pradesh, Karnataka, Kerala, Bangalore and Tamil Nadu -- now lead the country in a number of indices, including Packaging.
- South India has emerged as the largest consumer of 'poly ethylene terephthalate' (PET) material for packaging mineral water.
- South India is emerging as a strong pharma hub with strong infrastructure of research facilities and scientists.
- Dairy product packaging constitutes a large portion of the South India Packaging industry.
- Abundant tea production in South India brings opportunities in paper bag packaging industry.
- Retail Sales of packaged food is growing at a rate of 12 percent in South India.
- As Coffee and Spice output in the Southern hemisphere see a steady incline of close to 10 percent individually and export markets pick up again, newer opportunities arise for various packaging segments.
- While major components such as cartons, cans and laminates, which are Bureau of Indian Standards (BIS) certified, are of global standards, the glass bottles and outer cartons are areas that need to be upgraded.

TECHNICAL ASPECTS:

INSTALLED CAPACITY:

50 mm width x 65 metres from 1000 mm width BOPP film the production will be 5310000 rolls per annum per shift of 8 hours.

10mm width x 50 metres from 1000 mm width BOPP film, the production will be 34560000 rolls.

The product mix will be 90% of 50 mm width tape and 10% of 10 mm tape per annum of 300 days in one shift. (i.e.,)

- a) $5310000 \times 90\% = 4779000$ rolls of 50mm tape.
- b) $34560000 \times 10\% = 3456000$ rolls of 10 mm tape.

The plant will work one shift for 300 days.

PLANT & MACHINERY

The plant and machinery required for manufacturing BOPP Self adhesive tapes are the following.

1. Coating machine 40" (1000 mm)	1 No.
2. 1000 mm slitter turret machine with accessories	1 No.
3. Automatic core cutting machine	1 No.
4. Baby slitter 6" (150 mm)	1 No.
5. Salvage rewinding machine (Doctor Winder)	1 No.
Total cost of machinery Rs. 38.50 lakhs	

MANUFACTURING PROCESS:

The BOPP roll is loaded in the coating machine and adhesive applied on one side. The coated roll is loaded in the slitting machine and the slit tapes wound in the paper core of required width automatically. The paper core of required width is obtained from the automatic core cutting machine by cutting from the long paper core.

RAW MATERIALS

The materials required for manufacturing self adhesive tapes are the following.

12 mm BOPP film in 1000 mm wide rolls.

Weight of BOPP film 17 gm/m²
Total length required 17280000 meters
Width 1 metre
Total 17280000 sq.metres

i.e., weight of BOPP film 293.76 metres.

$[(17280000/1000) \times (17/1000)]$

Price of BOPP film 12 micron Rs.1.50 lakhs per ton.

Cost of Raw materials Rs.1.50 x 293.76 MT. = Rs.440.51 lakhs.

Other consumables Adhesives & paper spool

Rs.5.00 per 50mm roll.

Rs.1.00 per 10mm roll

LAND & BUILDING:

Building area required 5000 sqft Rent Rs.50000 advance is Rs.5.00 lakhs.

UTILITIES

Electricity: Power requirement is 20 HP.

Water: Water required for human consumption.

Man Power Requirement:

Category	Nos	Monthly Salary	Total Monthly Salary
Manager	1	10000	10000
Skilled workers	2	6000	12000
Semi Skilled workers	4	5000	20000
Unskilled	4	4000	16000
Accountant	1	5000	5000
Supervisors	1	8000	8000
			71000
Add : Benefits	20%		14200

Total			85200
Total wages per annum [Rs. lakhs]			Rs.10.22

IMPLEMENTATION SCHEDULE:

The machines are available indigenously. The entire project can be implemented within 2 months.

ASSUMPTIONS

1. Installed Capacity-50 MM rolls-4779000 Rolls per annum and 10MM rolls-3456000 Rolls per annum.
2. Selling Price 50 MM roll Rs.18.00 per Roll and 10MM roll Rs.8.00 per roll.
3. Capacity utilization-Year 1-30%,Year 2-40% and Year 3-50%
4. Raw material cost at 100% Rs.440.51 Lakhs.
5. Consumables Rs.5.00 per 50 mm Roll and Rs1.00 per 10mm roll
6. Power charges at Rs.1.87 lakhs per annum at 100%
7. Wages & salaries at Rs.10.22 lakhs at 100% as per the breakup given above with annual increase 5%.
8. Repairs & maintenance at Rs.1.20 lakhs p.a (Rs. 10000 per month) with annual increase 5%
9. Depreciation on WDV method at 15% on plant and machinery.
- 10.Administration and General expenses at Rs.12.00 p.a (Rs. 100000 p.m) with annual increase 5%
- 11.Selling Expenses at 5% on sales.
- 12.Interest on Term Loan 12% p.a
- 13.Interest on working capital 12%p.a
- 14.Income tax at 33.22% on profits

LIST OF MACHINERY SUPPLIER

1. M/s. Sainath Engineering Works, 114, 2nd floor Bhandup Industrial Estate, Panalal Silk Mill Compound, LBS Marg Bhandup West, Mumbai - 400 078.

2. Jangir Company, A-39, A-40 & 24/7 Near Jhandewala Petrol Pump, G.T.Road, Libaspur, Delhi-110005.
3. Marsons Print Graf Machines Pvt Ltd, D/8-9 Udhyog Sadan, No-2 MIDC, Andheri East, Mumbai-400093.

RAW MATERIAL SUPPLIERS

1. Jampex Trading Private Limited, 160 Linghi Chetty Street Chennai-600001
2. Kankriya Enterprises, 34/1 Chinnaya street, Sarangapani Nagar, Madhavaram, Chennai-600060
3. Jindal Polyfilms Ltd, Plot: 12 LSC, Vasant Kunj, New Delhi
4. Cosmo Films Ltd, MIDC, Waluj, Aurangabad, Maharastra

FINANCIAL ASPECTS

1. COST OF PROJECT

[Rs. lakhs]

Building	5.00
Plant & Machinery	38.50
Contingencies	3.85
Other Misc. assets	1.00
Pre-Operative expenses	3.00
Margin for WC	14.75
Total	66.10

2. MEANS OF FINANCE

Capital	30.10
Term Loan	36.00
Total	66.10

3. COST OF PRODUCTION & PROFITABILITY STATEMENTS

	[Rs.lakhs]		
Years	1	2	3
Installed Capacity - BOPP Self Adhesive Tapes			
a) 50 mm rolls Nos.	4779000	4779000	4779000
b) 10 mm rolls Nos.	3456000	3456000	3456000
Utilisation	30%	40%	50%
Production/Sales			
a) 50 mm rolls Nos.	1433700	1911600	2389500
b) 10 mm rolls Nos.	1036800	1382400	1728000
Selling Rate			
a) 50 mm rolls Nos.	Rs.18.00	per roll	
b) 10 mm rolls Nos.	Rs.8.00	per roll	
Sales Value (Rs.lakhs)			
a) 50 mm rolls Nos.	258.07	344.09	430.11
b) 10 mm rolls Nos.	82.94	110.59	138.24
Total Value (Rs.lakhs)	341.01	454.68	568.35
Raw Materials	132.19	176.26	220.32
Consumables	82.06	109.40	136.76
Power	0.56	0.75	0.94

Wages & Salaries	10.22	10.73	11.27
Repairs & Maintenance	1.20	1.32	1.45
Depreciation	11.43	8.59	6.46
Cost of Production	237.66	307.05	377.20
Admin. & General expenses	12.00	12.60	13.23
Selling expenses	17.05	22.73	28.42
Interest on Term Loan	4.32	3.78	2.70
Interest on Working Capital	7.17	7.17	7.17
Total	278.20	353.33	428.72
Profit Before Tax	62.81	101.35	139.63
Provision for tax	20.87	33.67	46.39
Profit After Tax	41.94	67.68	93.24
Add: Depreciation	11.43	8.59	6.46
Cash Accruals	53.37	76.27	99.70

4. WORKING CAPITAL:

	Months	Values	%	Margin	Bank
	Consumptions			Amount	Finance
Raw Materials	2.00	22.03	25%	5.51	16.52
Consumables	2.00	13.68	25%	3.42	10.26
Finished goods	0.50	9.90	25%	2.48	7.42
Debtors	1.00	28.42	10%	2.84	25.58
Expenses	1.00	0.50	100%	0.50	0.00
		74.53		14.75	59.78

5. PROFITABILITY RATIOS BASED ON 50% UTILISATION

$\frac{\text{Profit after Tax}}{\text{Sales}}$	=	$\frac{93.24}{568.35}$	16%
$\frac{\text{Profit before Interest and Tax}}{\text{Total Investment}}$	=	$\frac{149.50}{125.88}$	119%
$\frac{\text{Profit after Tax}}{\text{Promoters Capital}}$	=	$\frac{93.24}{30.10}$	310%

6. BREAK EVEN LEVEL

Fixed Cost (FC):

	[Rs. lakhs]
Wages & Salaries	11.27
Repairs & Maintenance	1.45

Depreciation	6.46
Admin. & General expenses	13.23
Interest on TL	<u>2.70</u>
	<u>35.11</u>

Profit Before Tax (P) 139.63

$$\text{BEL} = \frac{\text{FC} \times 100}{\text{FC} + \text{P}} = \frac{35.11}{174.74} \times \frac{50}{100} \times 100$$

10% of installed capacity