

# **BUBBLE PACKING**

## **1. INTRODUCTION**

Air bubble polyethylene film is preferred over expanded polystyrene because it is cost effective. Resiliency of air bubble film is much higher than expanded polystyrene and ultimate volume of package is much lower if air bubble film is set. It is most suitable for packaging of light fragile items, sophisticated electronic goods, calculators etc.

## **2. PRODUCTS AND ITS APPLICATION**

The major areas of application are segregated into the following fields.

- Packaging of fragile items like crockery, Glassware, Ceramic Products etc.
- Packaging of electronic & Electrical Appliances.
- Plastic machinery parts packaging.
- Precious antiques packaging.
- Pharmaceutical bottles, vials packaging etc.
- Some special type of chemical packaging.
- Handicrafts
- Pharmaceuticals
- Scientific Instruments
- Engineering & Automobile Spare Parts
- Fruits & Vegetables
- Machinery Wrapping

### **3. DESIRED QUALIFICATION FOR PROMOTER**

The Promoter should have preferably a basic degree in plastic engineering/ processing or a degree/ diploma in engineering / or a degree in chemistry. Experience of at least two to three years in plastic industry is desirable.

### **4. INDUSTRY OUTLOOK AND TRENDS**

Air bubble packaging film has gained a good status in packaging field as a convenient and economical cushioning material. Cushioning materials are available in many types and forms. The old traditional wood excelsior and shredded paper or tissue have been supplemented or replaced by corrugated pads. Further sophistication, convenience and improved functional characteristic in cushioning have been achieved by using various types of plastic foams. Most commonly used plastic foam for packaging application is expanded polystyrene.

The demand generation of electronic goods in recent years has left wide gap to fulfill the packaging need using air bubble film which has generated a good potential of the project for new entrepreneurs. Besides packaging applications, air bubble film is widely used in developed countries as swimming pool cover.

### **5. MARKET POTENTIAL AND MARKETING ISSUES, IF ANY**

The demand generation of electronic goods in recent years has left a wide gap to fulfill the packaging need using air bubble film which has generated a good potential of the project for new entrepreneurs. Besides packaging applications, air bubble film is widely used in developed countries as swimming pool cover. Packaging industry in India has an estimated turnover of Rs. 11,500 crores, which is growing at the rate of 18 per cent annually. The changing pattern of the Indian Consumer behavior directly affects the packaging industry as the direct expenditure incurred by companies to make the products attractively packaged is increasing day by day. The industry has a huge potential and it is growing at a rapid pace.

## 6. RAW MATERIAL REQUIREMENTS

LLDPE Granules

## 7. MANUFACTURING PROCESS

LLDPE granules fed into the hoppers of 100 mm and 75mm extruder respectively pass through the extruders, where they are melted, plasticized and forced through the 2 layer nips of T die. In the die two layers of LLDPE sheets of required thickness are formed simultaneously. These two layers are passed through two silicon synthetic cooling rollers where air bubbles are thermo formed over one roller and simultaneously it is laminated by forcing other layer by pressure. At this point, vacuum forming of bubble, cooling of outer surface of both layers and lamination of thermoformed layer on secondary layer occur simultaneously.

After this the formed layers are cooled and moved forward trimmed and then to the winder through take off rollers and then to winder.

## 8. MANPOWER REQUIREMENT

Sr. No.	Particulars	Nos	Salary (Rs.)
1	Manager	1	12000
2	Accountant	1	10000
3	Office Assistant	1	7000
4	Office Boy	1	6000
5	Supervisor	4	36000
6	Skilled	8	64000
7	Semi-skilled	8	48000
8	Unskilled	12	60000
	<b>Total</b>	<b>24</b>	<b>1,83,000</b>

## 9. IMPLEMENTATION SCHEDULE

Estimated implementation time for the project would be 15 to 17 months.

Sr. No.	Particulars	Time Period
1	preparation of Project report	Two months
2	Sanction of loan	Four months
3	Selection of Site	Twomonth
4	Registration as Small Scale Unit	One month
5	Time required for procurement of Machinery, erection and commissioning	six Months
6	Trial production and commissioning	Two Months

## 10. COST OF PROJECT

Sr. No.	Particulars	Rs. In lakhs
1	Land and Building	32.00
2	Plant and Machinery	45.00
3	Miscellaneous Assets	7.85
4	P & P Expenses	4.00
5	Contingencies @ 10% on land and building and plant and machinery	7.70
6	Working capital margin	54.31
	<b>Total</b>	<b>150.86</b>

## 11. MEANS OF FINANCE

Sr. No.	Particulars	Rs. (lakhs)
1	Promoter's contribution	45.258
2	Bank Finance	105.602
3	<b>Total</b>	<b>150.86</b>

## 12. WORKING CAPITAL CALCULATION

Sr. No.	Particulars	Rs. lakhs	Stock Period days	Promoter Margin	Margin Amt.	Bank Finance
1	Salaries and wages	1.83	30	1	1.83	-
2	Raw material and packaging material	47.74	30	0.5	23.87	23.87
3	Utilities	4.82	30	0.5	2.41	2.41
4	Debtors	65.5	30	0.4	26.2	39.3
	Total	119.89			54.31	

## 13. LIST OF MACHINERY REQUIRED

Sr. No.	Particulars	Rs. In Lakhs
1	Air Bubble sheet Plant	45
	Total	45

The machinery is manufactured by a number of companies such as M/s. KonarkPlastomac Pvt. LTd., M/s. Remika Plastic Machinery Industries, Sunrise Palstic Machinery Mfg; M/s.PolypriseIncorporatedetc.

## 14. PROFITABILITY CALCULATIONS

(Rs. )

Sr. No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
(A)	Sales Realization	52513045	60014909	67516772.4	67516772.4	67516772.4
(B)	Cost of Production					
1	Raw material	40101600	45830400	51559200	51559200	51559200
2	Utilities	4045440	4623360	5201280	5201280	5201280
3	Salaries	2196000	2371680	2547360	2723040	2898720
4	Repairs and maintenance	450000	470000	490000	510000	530000
5	Selling expenses (3% on sales value)	1575391	1800447	2025503.172	2025503.17	2025503.172
6	Administrative Expenses (other expenses)	520000	540000	560000	580000	600000
	Total	48888431	55635887	62383343.17	62599023.2	62814703.17
(C)	Profit before interest & depreciation	3624614	4379022	5133429.228	4917749.23	4702069.228
	depreciation	1155000	1155000	1155000	1155000	1155000
	Profit Before term loan and tax	2469614	3224022	3978429.228	3762749.23	3547069.228
	Interest on term loan (11%)	1120136	995676	829730	663784	497838
	Profit before tax	1349478	2228346	3148699.228	3098965.23	3049231.228
	Tax (30%)	404843.5	668503.7	944609.7684	929689.568	914769.3684
	Total Profit	944634.8	1559842	2204089.46	2169275.66	2134461.86

Underlying assumptions for probability calculation are:-

The installed capacity of the plant is assumed at 675 MT per annum. The capacity utilization for the first year is taken at 70% of installed capacity which will be increased to 90% in the third year. The raw material price is assumed at Rs. 86/- per KG. The selling price is taken at Rs.111/- per KG. Power cost is taken at Rs.8/- per unit. Interest rate on long term loan is taken at 11%.

## 15. BREAKEVEN ANALYSIS

Fixed Cost (FC):	Rs. In lakhs
Wages & Salaries	21.96
Repairs & Maintenance	4.5
Depreciation	11.55
Admin. & General expenses	5.2
Interest on Term Loan	11.2
Total	<b>54.41</b>

Fixed Cost: 54.41

Profit After Tax: 9.44

$$\text{BEP} = \text{FC} \times 100 / \text{FC} + \text{P}$$

$$54.41 / 63.85 \times 70 / 100 \times 100$$

**59.65%**

## 16. STATUTORY/GOVERNMENT APPROVALS

There is no specific statutory requirement for plastic industry process. However, MSME registration various taxation related registration and labour law related compliances have to be ensured. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

## **17. BACKWARD & FORWARD LINKAGES**

There are no specific backward or forward linkages related techno-economic advantages or synergies for this type of project. However, in future after achieving certain growth entrepreneur may consider backward linkage.

## **18. TRAINING CENTRE AND COURSES:**

There are number of institutions providing facilities and training courses on production/marketing for the proposed project. These are Central Institute of Plastic Engineering and Technology (CIPET), Indian Institute of Packaging Management (IIPM), Plastic and Rubber Institute (PRI), Indo German Tool Room (IGTR), etc.

Udyamimitraportal ( link : [www.udyamimitra.in](http://www.udyamimitra.in) ) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

### **Disclaimer:**

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.