**Profile No.: 72** **NIC Code:22203**

# 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 |
| | **Total** | **24** | **1,83,000** |

## 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 | Two month |
| 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 |
| | **Total** | **150.86** |

## 11. MEANS OF FINANCE

| Sr. No. | Particulars | Rs. (lakhs) |
|---|---|---|
| 1 | Promoter's contribution | 45.258 |
| 2 | Bank Finance | 105.602 |
| 3 | **Total** | **150.86** |

## 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. Konark Plastomac Pvt. LTd., M/s. Remika Plastic Machinery Industries, Sunrise Palstic Machinery Mfg; M/s.Polyprise Incorporatedetc.

## 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 | **54.41** |

Fixed Cost: 54.41

Profit After Tax: 9.44

**BEP = FC x 100/FC+P**

54.41 /63.85 x 70/100 x 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.

Udyamimitra portal ( link : 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.