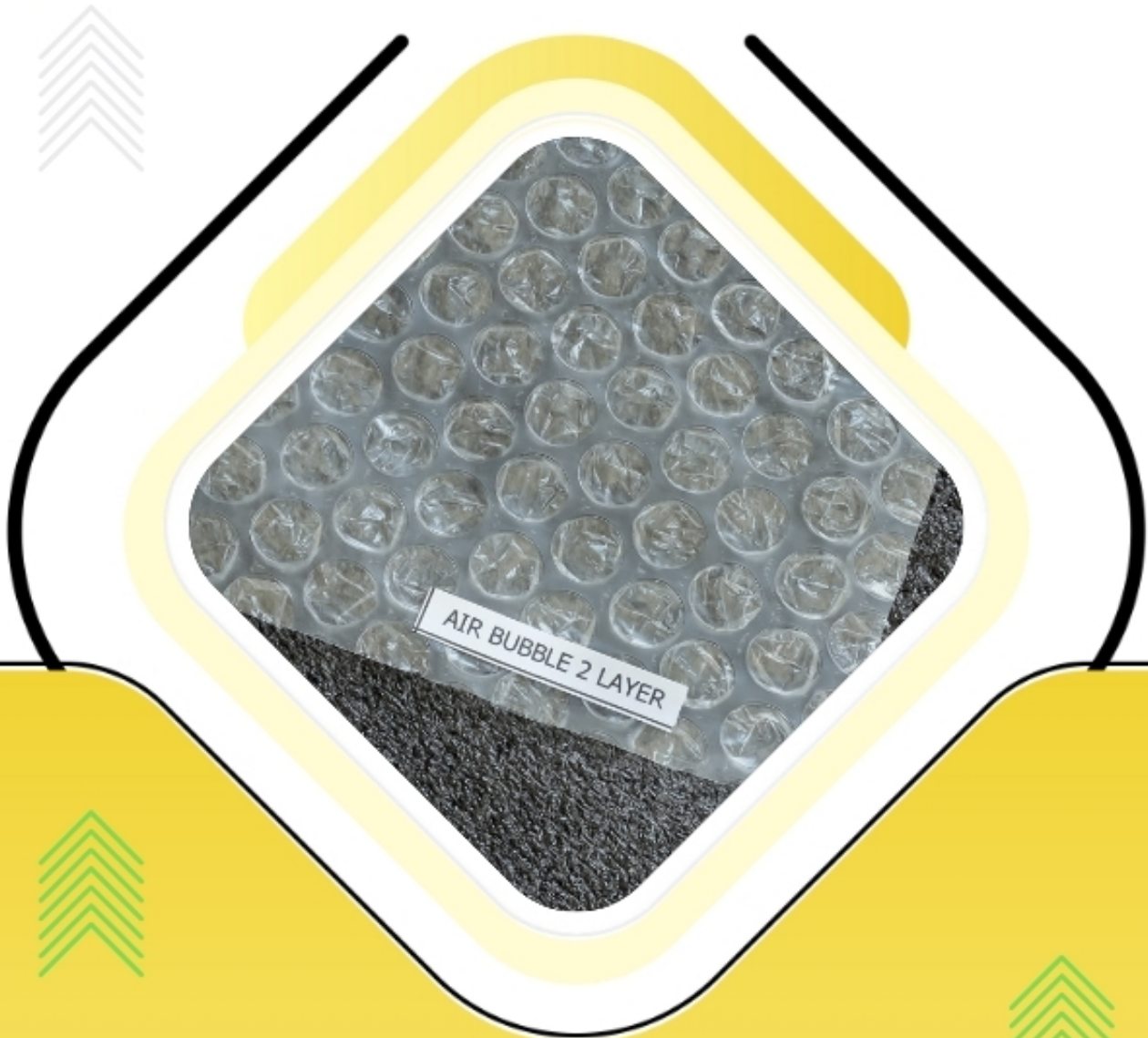




MODEL PROJECT REPORT



PROJECT REPORT ON AIR BUBBLE SHEET

SWAVALAMBI BHARAT ABHIYAN

AIR BUBBLE PACKAGING



A. INTRODUCTION:

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.

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 used. It is most suitable for packaging of light fragile items, sophisticated electronic goods, calculators etc.

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.

B. PRODUCT USES & SPECIFICATIONS:

The major area of application may be segregated into the following fields.

1. Packaging of fragile items like crockery etc.
2. Packaging of electronic items.
3. Plastic machinery parts packaging.
4. Precious antiques packaging.
5. Pharmaceutical bottles, vials packaging etc..
6. Some special type of chemical packaging.

SPECIFICATIONS:

Air bubble film is a two-layer laminated low density polyethylene film with entrapped air inside, between the two layers in bubble form in some orderly fashion. Air bubbles render cushioning effect. The bubbles may be of different sizes. The size of bubble and thickness of film is decided depending upon the end use (i.e.,) the type and weight of content to be packed.

Air bubble LDPE film has following properties.

1. Excellent water resistance
2. Atmospheric resistance
3. High dielectric properties.
4. Resistance to termite and white ant.
5. Easy and economical packaging process.
6. Very high shock absorption property.
7. Resistant to most acid and alkalis for moderate duration.
8. Light in weight, attractive look, printable, washable and heat sealable.

C. MARKET POTENTIAL:

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.

The packaging industry in India, which started way back in the 1950's, has grown slowly and steadily in both quality and quantity. The 70's and 80's witnessed a remarkable change in materials as well as machinery depending on the tastes of the markets.

In the 80's the Indian packaging industry witnessed about four to live percent growth. But after the brand awareness caught on around the 90's the growth touched 15-20 per cent. This has not only given face-lift to the industry but also opened it up for innovations. In this period, the industry by and large, depended on domestic resources for materials as well as machinery. This was due to various restrictions on imports. Towards the mid 90's, liberalization opened the industry further and it began to reflect in the changes in consumers' consumption pattern.

Packaging manufacturers are responding with the state-of-the-art solutions such as multi-layer foils, trays, stand bags, PET bottles, lids and closures. Ongoing innovations by the plastics industry help to accommodate these requirements. The major disadvantage of all plastic materials is the fact that they are gas-permeable, whereas glass, tinfoil and aluminum offer almost 100 percent protection.

The global market for packaging is worth US \$900 billion and India's share is only US \$3 billion. This itself shows the potential for growth as the economy expands with large consumers in the waiting. If India can increase the penetration level in the global market, the packaging industry can become a fast-emerging industry in India. The packaging industry faces a challenge from the ever-growing demands of consumers, who want food to remain fresh longer, as well as being easy to handle, healthy and packaged in environmentally – friendly materials.

D. TECHNICAL ASPECTS:

Installed Capacity:

The capacity envisaged is 1440 MT per annum on the basis of single shifts per day for 300 days. This works out to 10435200 sq.mtrs.

Plant & Machinery

Polycell Bubble Sheet Making machine	Rs. 50.00
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Manufacturing Process:

LDPE 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 LDPE 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.

Raw Materials

LDPE granules	1515.6 MT/annum.
Price	Rs.87 per kg.

Land & Building:

Land	20,000 Sq.ft.
Building	4,500 Sq.ft.

Utilities:

Electricity

Power requirement is 373 KW. is sufficient for operation. For

Heaters	222 KW	225 KW
For Motors	174 HP	130 KW
For Miscl.	25 HP	18 KW
Total Power		373 KW

Power Consumed per annum (373 x 8 hrs x 300 days)	=	667820 KW
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Water: Water about 15000 kilo litres is required for process.

Effluent Treatment:

Process does not discharge any harmful effluent. However NOC from Pollution Control Board has to be obtained.

Man Power Requirement:

S.No.	Designation	No.
1	Manager	1
2	Accountant	1
4	Office Boy	1
5	Supervisor	2
6	Skilled	3
8	Unskilled	2
9	Maintenance fitter	1
10	Electrician	1
	Total Monthly Salary	
	Total Annual Salary	12

7. ASSUMPTIONS:

1. Installed capacity-1440 Mt (10435200 Square metres) per annum
2. Capacity utilization Year 1- 60%, Year 2-70% and Year 3-80%
3. Selling Price Rs.17 per Sq.mt
4. Raw materials at 100 % capacity Rs.1318.57 lakhs
5. Power charges at 100% Rs.47 lakhs –Power rate Rs.7.00 per unit
6. Admn & general expenses Rs.24.82lakh per annum
7. Interest on Term Loan and Working capital finance 12% p.a.

FINANCIAL ASPECTS**1. COST OF PROJECT**

[Rs.lakhs]

S.NO.	PARTICULARS	TOTAL COST	MARGIN 25%	LOAN
1	Land & Building		Leased/Owned	
2	Plant and Machinery	50.00	12.50	37.50
3	Furniture & Fixture	2.50	0.63	1.88
4	Contingencies	8.00	8.00	-
6	Margin for Working Capital	5.56	5.56	-
	Total	66.06	26.68	39.38

2. MEANS OF FINANCE

S.NO.	PARTICULARS		AMOUNT
1	Own Contribution		26.68
2	Term Loan		39.38
	Total		66.06

COST OF PRODUCTION & PROFITABILITY STATEMENTS

Years	1	2	3
Installed Capacity - MT	1440	1440	1440
- Sqmt.	10435200	10435200	10435200
Utilization	60%	70%	80%
Production/Sales - MT	864	1008	1152
- Sqmt.	6261120	7304640	8348160
Selling Price per Sqmt. Rs	Rs. 15	15.00	15.00
Sales Value (Rs.lakhs)	939.17	1095.70	1252.22
Raw Materials	792.64	924.75	1056.86
Power	28.20	32.90	37.60
Wages & Salaries	21.24	24.78	28.32
Admin. & Selling expenses	14.89	17.38	19.86
Cost of Production	856.98	999.80	1142.63
Interest on Loan	39.34	38.14	36.94
Total	896.31	1037.94	1179.57
Profit Before Tax	42.86	57.76	72.65
Add: Depreciation	7.50	6.38	5.41
Cash Accruals	50.36	64.13	78.06

TOTAL WORKING CAPITAL 3 MONTHS

1	Salary and Wages		3,540,000.00
2	Raw Material		132,107,200.00
3	Utilities		4,699,734.40
4	Other selling and administrative Expenses		2,482,280.00
5	Total		1,428.29
6	Working Capital for 3 months	Rs in Lakhs	357.07
7	Less: Margin	25%	89.26
8	Working capital Requirement		267.81