
Pre-Feasibility Study

PVC SHRINK SLEEVES MANUFACTURING UNIT



Small and Medium Enterprises Development Authority

Ministry of Industries & Production

Government of Pakistan

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1 DISCLAIMER

This information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although, the material included in this document is based on data/information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although, due care and diligence has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEDA, its employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information which is necessary for making an informed decision, including taking professional advice from a qualified consultant/technical expert before taking any decision to act upon the information.

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2 EXECUTIVE SUMMARY

Polyvinyl Chloride (PVC) is a high-density material, which is most commonly used for manufacturing of shrink sleeves. The demand of PVC Shrink Sleeves are steadily increasing due to their extensive use in labeling, packaging and sealing of multiple products, e.g. Soft Drinks, Juice Bottles etc. Shrink Sleeve labels are full-color printed labels that utilize heat in the application process to conform the label to the shape of the container. The sleeve is placed around the product to which it will be applied. Once heat is applied to the material, the sleeve will begin to shrink or compress to the product.

This particular pre-feasibility study is about 'Shrink Sleeve Manufacturing' made from PVC through extrusion process. The proposed unit can be established in Karachi, Lahore, Faisalabad or Sialkot as majority of the target customers i.e. manufacturers of Food and General Items packed in bottles and jars etc. are located in these cities. According to the proposed business model, the unit will operate on 'Order Manufacturing Basis' for the industrial clients. The unit will produce both printed and simple sleeves in different sizes as per the requirement of customers.

The proposed 'PVC Shrink Sleeves Manufacturing' unit will have an installed capacity of producing 84,000 kgs. of shrink sleeves per annum, based on a single shift of 8 hours and 300 operational days. It is assumed that 70% (58,800 Kgs.) of the total production capacity will be utilized for production of Printed Sleeves and the remaining 30% (25,200 Kgs.) will be used for 'Simple / Clear Sleeves' as per the customers demand. However, starting operational capacity is assumed at 70% with gradual increase of 5% in subsequent years up to maximum capacity utilization of 100% in 7th year. This production capacity is estimated to be economically viable and justifies the capital as well as operational cost of the project. Entrepreneur's knowledge of the industry, competitive pricing, and strong linkage with industrial clients are key factors for the success of this business.

Total project cost is estimated as Rs. 16.283 million with capital investment of Rs. 14.562 million and working capital Rs. 1.721 million. Based on an equity finance model, the project NPV is around Rs. 21.925 million, with an IRR of 37% and Payback Period of 3.70 years. The project will provide employment opportunities to 19 people including the Owner. The legal business status of this project is assumed to be 'Sole Proprietorship'.

3 INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectoral research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of experts and consultants and delivery of need based capacity building programs of different types in addition to business guidance through help desk services.

4 PURPOSE OF THE DOCUMENT

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in **PVC Shrink Sleeves Manufacturing Unit** by providing them with a general understanding of the business with the intention of supporting potential investors in crucial investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business set-up and its successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later, which form basis of any Investment Decision.

5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

Shrink Sleeves are full-colour 360-degree printed sleeves that utilize heat in the application process to conform the label to the shape of the product to which it is applied. It consists of heat-sensitive material that is seamed with openings on the top and bottom to create a "sleeve." The sleeve is placed around the product to which it is applied. Once heat is applied to the material, the sleeve begins to shrink or compress to the product. Shrink sleeves are now growing in popularity for cans, juice bottles, and other containers or jars. Beyond branding, shrink sleeves can function as

more than just a label. It can also be used to package multiple items together for the purpose of offering it as one product.

Polyvinyl Chloride (PVC) is a high-density material, which is most commonly used for manufacturing of shrink sleeves. PVC made sleeves can be easily applied on plastic, glass and metal packaging containers. Moreover, it can also be used in packaging of food & beverage products, pharmaceutical & nutraceutical and household cleaning products.

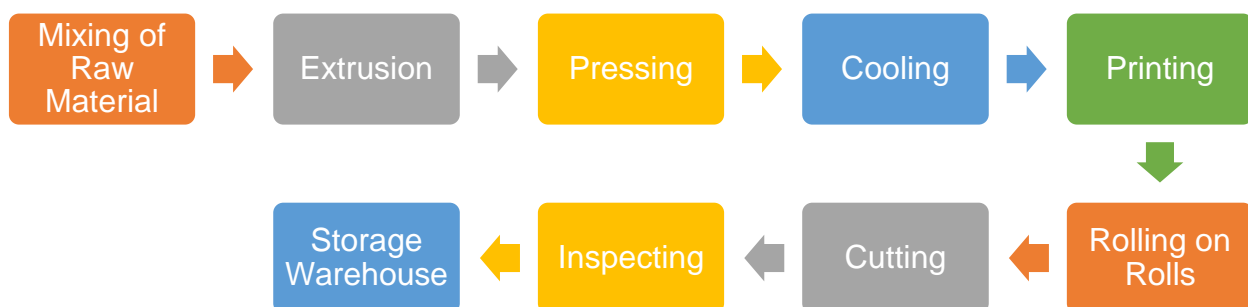
This particular pre-feasibility study is based on a fully automated technology for shrink sleeves manufacturing. Production line will mainly comprise of an Extruder Line, PVC Resin Mixer, Film Printing and Label Roll Cutting Machine for complete in-house production. Shrink sleeves will be produced through extrusion process while printing will be done as per the designs and specifications provided by the clients. The installed production line can produce shrink sleeves in various lengths and widths as per the customer requirement. The produced unit will produce both printed and simple sleeves.

Financial analysis shows the unit shall be profitable from the very first year of operation. The major clients of the proposed business will be manufacturer of juices, beverages, food items, pharmaceutical companies, and household cleaner manufacturers. The unit will primarily operate on 'Order Manufacturing Basis' for these industrial buyers. The ideal location for the proposed project is any major industrial city across Pakistan. The legal status is proposed to be 'Sole Proprietorship'.

5.1 Production Process Flow

The production process flow of PVC shrink sleeves manufacturing starts with the purchase of 'Polyvinyl Chloride (PVC) Granules' from the market. The key steps involved in the manufacturing process are Mixing, Warming, Melting, Pressing, Cooling, Printing, Rolling, Cutting and Inspecting operations. The process flow diagram of the air bubble packing sheet manufacturing is as follows.

Figure 1: Production Process Flow



5.2 Installed and Operational Capacities

The proposed unit will have installed capacity of producing 84,000 kg of PVC Shrink Sleeves per annum, based on based on a single shift of 8 hours and 300 operational days. However, starting operational capacity is assumed at 70% with gradual increase of 5% in subsequent years up to maximum capacity utilization of 100% in 7th year of operation.

Table 1: Installed and Operational Capacity

Product Mix	Production Percentage of Installed Capacity	Total Installed Capacity (Kg)	Operational Capacity 70 % (Year 1) Kg
Printed Sleeves	70%	58,800	41,160
Clear Sleeves	30%	25,200	17,640
Total	100%	84,000	58,800

6 CRITICAL FACTORS

Following are the factors critical for the success of this business venture;

- ⇒ Background knowledge and related experience of the entrepreneur in the field of plastic or polymer related manufacturing and plastic extrusion.
- ⇒ Selection of appropriate plant and machinery.
- ⇒ Selection of quality PVC Granules on the basis of best analysis of cost and revenues for a given season; cost efficiency through better management.
- ⇒ Exceed customer expectations by offering high quality products at reasonable prices with quick turnaround times.
- ⇒ Business location is the key to success for the plastic collapsible tube unit, in order to have greater reach to its customers to meet its revenue targets.
- ⇒ Stringent supervision of the production process at every level.
- ⇒ Induction of trained human resources for the handling of business operations especially in production and distribution
- ⇒ Effective marketing and distribution of the product.
- ⇒ Employ careful financial and accounting analysis to ensure efficiency and proper controls.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Location selection is critical to the success of the project. It is important to find a location preferably in an industrial cluster where utilities especially electricity and other infrastructure are conveniently available. Presently, Karachi, Lahore, Faisalabad, Sialkot, and Rawalpindi can be considered most suitable areas as most of the industrial consumers of shrink sleeves are located in these cities, and being close to large buyers may lead to consistent orders and referrals. Additionally, these cities have adequate availability of skilled labor, raw material sources and infrastructure.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

Potential target customers for the produced PVC shrink sleeves will mainly comprise of manufacturers of food & beverages, pharmaceutical product and household cleaner, who require shrink sleeves as packaging and labelling of their product.

Since, majority of the target customer belong to the business segments, therefore, above identified metropolitan cities will be the potential markets for the produced PVC shrink sleeves. The unit will mainly operate on 'Order Manufacturing Basis' for the potential industrial buyers.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyse the commercial viability of PVC shrinks sleeve manufacturing unit. Various cost and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cash Flow Statement and Balance Sheet are attached as annexures.

9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 34.220 in the year one. The capacity utilization during year one is worked out at 70% with 5% increase in subsequent years up to the maximum capacity utilization of 100%.

The following table shows internal rate of return, payback period and net present value of the proposed venture.

Table 2: Project Economics

Description	Details
Internal Rate of Return (IRR)	37%

Payback Period (Yrs.)	3.70
Net Present Value (Rs.)	21,924,745

Calculation of break-even analysis is as follows:

Table 3: Breakeven (100% Equity Based)

Break-Even Analysis	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Break-Even Revenue	30,453,439	30,883,060	31,696,234	32,902,708	34,360,347	36,480,066	38,609,752	41,734,927	45,210,127	49,124,634
Break-Even Units	52,328	48,242	45,011	42,477	40,326	38,922	37,449	36,800	36,240	35,798
Margin of Safety	11%	23%	33%	41%	47%	51%	55%	56%	57%	57%

However, for the purposes of further explanation the Project Economics based on Debt:Equity (i.e. 50:50) Model has also been computed. Based on Debt: Equity model the Internal Rate of Return, Payback Period and Net Present Value of the proposed project are provide in the table below.

Table 4: Project Economics Based on Debt (50%):Equity (50%)

Description	Details
Internal Rate of Return (IRR)	35%
Payback Period (Yrs.)	3.86
Net Present Value (Rs.)	26,631,504

The financial assumptions for Debt:Equity are as follows:

Table 5: Financial Assumptions for Debt:Equity Model

Description	Details
Debt (50%)	8,165,314
Equity (50%)	8,165,314
Interest Rate on Debt	12%
Debt Tenure	5
Debt Payment / Year	2

The projected Income Statement, Cash Flow Statement and Balance Sheet attached as annexures are based on 100% Equity Based Business Model.

9.2 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business.

Table 6: Project Cost

Description	Amount Rs.
Capital Cost	
Machinery & Equipment	10,786,074
Furniture & Fixtures	1,650,500
Office Vehicles	1,270,000
Office & Computer Equipment	369,500
Wapda Security	201,000
Pre-Operating Costs	95,000
Licensing & Legal Fee	190,000
Total Capital Cost	14,562,074
Equipment Spare Part Inventory	12,250
Raw Material Inventory	595,873
Upfront Building Rental	450,000
Cash	662,970
Total Working Capital	1,721,093
Total Project Cost	16,283,166

9.3 Space Requirement

An estimated area of 4,500 sq. ft. will be required for the proposed venture. In order to reduce the initial capital expenditure, the proposed PVC Shrink Sleeves Manufacturing Unit will be established on a rental premises. For that purposes, space may be acquired in the industrial state or in the outskirts of big cities near to industrial units. The rent of the building will depend on the area and geographical location of the unit.

The area requirement has been calculated on the basis of space requirement for Production, Management, Storage and Open Space. However, the unit's operating in

the industry do not follow any set pattern. Following table provide the details of required space requirement.

Table 7: Space Requirement

Description	Estimated Area (Sq. ft)
Owners Office	200
Supervisors Office	270
Production Hall	2,000
Cutting Department	725
Mixing Department	225
Raw Material & Finished Goods Store	500
Meeting Room	150
Electrical Room	80
Washroom	72
Open Area	278
Total	4,500

For this particular pre-feasibility the rent amount has been determined at Rs.150,000 per month.

9.4 Machinery & Equipment Requirement

Plant, machinery and equipment for the proposed project are stated below.

Table 8: Machinery & Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Extruder	1	3,248,221	3,248,221
Film Printing Machine	1	2,037,952	2,037,952
Label Roll Cutting Machine	1	1,295,288	1,295,288
PVC Resin Mixer	1	190,038	190,038
Generator	1	1,850,000	1,850,000
Transformer	1	811,000	811,000
Security Equipment	1	55,000	55,000

Installation Cost		338,575	338,575
Boarding and Lodgings		960,000	960,000
Total			10,786,074

9.5 Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below.

Table 9: Furniture & Fixture

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Table & Chairs	5	35,000	175,000
Visitor Chairs	8	8,000	64,000
Sofas	2	12,000	24,000
Cupboard	1	15,000	15,000
Miscellaneous Furniture		150,000	150,000
Ceiling Fans	12	4,000	48,000
Exhaust Fans	3	2,500	7,500
LED Bulbs (18 Watts)	17	1,000	17,000
Air Conditioners (1 ton Split)	2	75,000	150,000
Interior/Renovation	1	1,000,000	1,000,000
Total			1,650,500

9.6 Office vehicles Requirement

Details of the office vehicles required for the project are given below.

Table 10: Office Vehicles

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Pick up	1	1,100,000	1,100,000
Motor Bike CD 70	2	85,000	170,000
Total			1,270,000

9.7 Office Equipment Requirement

Following office and computer equipment will be required for the project.

Table 11: Office & Computer Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Computers	4	40,000	160,000
Computer printer (s)	1	25,000	25,000
Scanner	1	15,000	15,000
UPS with Batteries	1	125,000	125,000
Water Dispenser	2	20,000	40,000
Telephones	3	1,500	4,500
Total			369,500

9.8 Raw Material Requirement

Polyvinyl Chloride Resin and Plasticizer for PVC Pelletting are the main raw materials for the proposed business, which will be procured directly from local market. The following table provides the details for the raw material requirements for first year of operations for the proposed PVC membrane for water proofing manufacturing plant.

Table 12: Raw Material Requirements (Year 1)

Description	Required Quantity (Kg)	Unit Cost (Rs. / Kg.)	Total Cost (Rs.)
Polyvinyl Chloride Resin and Other Material (Kg)	58,800	215.18	12,652,584
Printing Inks (Bottles)	550	3000	1,650,000
Total			14,302,584

9.9 Human Resource Requirement

In order to run operations of PVC shrink sleeves manufacturing unit smoothly, details of human resources required along with number of employees and monthly salary are recommended as under.

Table 13: Human Resource Requirement

Description	No. of Employees	Monthly Salary per Person (Rs.)
Owner / Manager	1	75,000
Senior Extruder Handler	1	45,000
Senior Cutting Handler	1	35,000
Accountant	1	35,000
Supervisor Printing Department	2	35,000
Marketing Executive	1	40,000
Sales Officers	2	30,000
Workers	8	22,000
Security Guards	1	20,000
Driver	1	25,000
Total	19	

9.10 Utilities and Other Cost

An essential cost to be borne by the project is the cost of electricity. The electricity expenses are estimated to be around Rs. 383,165 (direct & indirect) per month. Furthermore, promotional expense being essential for marketing of PVC shrink sleeves manufacturing unit is estimated as 1% of revenue.

9.11 Revenue Generation

Based on the capacity utilization of 70%, sales revenue during the first year of operations is provided in the table below.

Table 14: Revenue Generation – Year 1

Description	No. of Units Produced (Kgs)	Wastage (Kgs)	No. of Units Sold (Kgs)	Sale Price (Rs. / Kg.)	Sales Revenue (Rs.)
Shrink Sleeve Printed	41,160	6,174	34,986	810	28,338,660
Shrink Sleeve Simple	17,640	1,411	16,229	325	5,274,360

Wastage			7,585	80	606,816
Total		7,585	58,800		34,219,836

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of machinery supplier relevant to the proposed project is given below.

Table 15: Machinery Supplier

Name of Supplier	Address	Phone / Email
Wenzhou Yujun Packing Machinery Co., Ltd	No. 38 Shengfa Road, Light Industrial Zone, Lucheng District, Wenzhou, Zhejiang, China	rachel225@wenzhou.com +86 1886 6738 661

11 USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries & Production	www.moip.gov.pk
Government of Punjab	www.punjab.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Khyber Pakhtunkhwa	www.khyberpakhtunkhwa.gov.pk
Government of Baluchistan	www.balochistan.gov.pk
Government of Gilgit Baltistan	www.gilgitbaltistan.gov.pk
Government of Azad Jammu Kashmir	www.ajk.gov.pk
Trade Development Authority of Pakistan (TDAP)	www.tdap.gov.pk
Security Commission of Pakistan (SECP)	www.secp.gov.pk
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	www.fpcci.com.pk
State Bank of Pakistan (SBP)	www.sbp.org.pk

Punjab Small Industries Corporation	www.psic.gop.pk
Sindh Small Industries Corporation	www.ssic.gos.pk
Punjab Vocational Training Council (PVTTC)	www.pvtc.gop.pk
Punjab Industrial Estates (PIE)	www.pie.com.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.pk
Pakistan Plastic Manufacturers Association	www.pakplas.com.pk
Technical Education and Vocational Training Authority (TEVTA)	www.tevta.org

12 ANNEXURES

12.1 Income Statement

Calculations										SMEDA
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	34,219,836	40,330,521	47,321,145	55,306,588	64,415,908	74,794,027	86,603,610	95,263,971	104,790,368	115,269,405
<i>Cost of sales</i>										
Raw Material Cost	14,300,947	16,854,688	19,776,167	23,113,395	26,920,308	31,257,468	36,192,858	39,812,144	43,793,358	48,172,694
Operation costs 1 (direct labor)	3,912,000	4,303,200	4,733,520	5,206,872	5,727,559	6,300,315	6,930,347	7,623,381	8,385,719	9,224,291
Operating costs 2 (machinery maintenance)	294,000	346,500	406,560	475,167	553,430	642,593	744,056	818,461	900,307	990,338
Operating costs 3 (direct electricity)	4,508,006	4,958,807	5,454,688	6,000,157	6,600,172	7,260,189	7,986,208	8,784,829	9,663,312	10,629,643
Operating costs 4 (direct water)	-	-	-	-	-	-	-	-	-	-
Operating costs 5 (direct gas)	-	-	-	-	-	-	-	-	-	-
Total cost of sales	23,014,954	26,463,195	30,370,935	34,795,591	39,801,469	45,460,566	51,853,469	57,038,815	62,742,697	69,016,967
Gross Profit	11,204,882	13,867,326	16,950,210	20,510,997	24,614,439	29,333,460	34,750,141	38,225,155	42,047,671	46,252,438
<i>General administration & selling expenses</i>										
Administration expense	3,060,000	3,366,000	3,702,600	4,072,860	4,480,146	4,928,161	5,420,977	5,963,074	6,559,382	7,215,320
Building rental expense	1,800,000	1,980,000	2,178,000	2,395,800	2,635,380	2,898,918	3,188,810	3,507,691	3,858,460	4,244,306
Electricity expense	89,979	98,977	108,874	119,762	131,738	144,912	159,403	175,343	192,878	212,165
Water expense	78,240	86,064	94,670	104,137	114,551	126,006	138,607	152,468	167,714	184,486
Travelling expense	306,000	336,600	370,260	407,286	448,015	492,816	542,098	596,307	655,938	721,532
Communications expense (phone, fax, mail, internet, etc.)	117,360	129,096	142,006	156,206	171,827	189,009	207,910	228,701	251,572	276,729
Office vehicles running expense	508,000	558,800	614,680	676,148	743,763	818,139	899,953	989,948	1,088,943	1,197,837
Office expenses (stationary, entertainment, janitorial services, etc)	469,440	516,384	568,022	624,825	687,307	756,038	831,642	914,806	1,006,286	1,106,915
Promotional expense	1,026,595	923,936	831,542	748,388	673,549	606,194	545,575	491,017	441,916	397,724
Professional fees (legal, audit, consultants, etc.)	256,649	302,479	354,909	414,799	483,119	560,955	649,527	714,480	785,928	864,521
Depreciation expense	1,609,357	1,609,357	1,609,357	1,629,513	1,626,263	1,781,332	1,804,664	1,800,902	1,800,902	1,827,912
Amortization of pre-operating costs	19,000	19,000	19,000	19,000	19,000	-	-	-	-	-
Amortization of Connection charges	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000
Miscellaneous expense 1	612,000	673,200	740,520	814,572	896,029	985,632	1,084,195	1,192,615	1,311,876	1,443,064
Subtotal	9,971,620	10,618,893	11,353,441	12,202,296	13,129,687	14,307,113	15,492,361	16,746,353	18,140,795	19,711,511
Operating Income	1,233,262	3,248,433	5,596,769	8,308,701	11,484,753	15,026,348	19,257,781	21,478,803	23,906,876	26,540,927
Other income (interest on cash)	32,826	91,615	182,115	291,622	402,210	528,913	702,323	891,239	1,072,034	1,336,670
Gain / (loss) on sale of computer equipment	-	-	81,250	-	-	175,307	-	-	284,190	226,882
Gain / (loss) on sale of office vehicles	-	-	-	-	508,000	-	-	-	-	-
Earnings Before Interest & Taxes	1,266,088	3,340,049	5,860,134	8,600,323	12,394,963	15,730,567	19,960,104	22,370,042	25,263,100	28,104,479
Tax	79,913	455,012	1,178,040	2,130,113	3,458,237	4,625,698	6,106,036	6,949,514	7,962,085	8,956,567
NET PROFIT/(LOSS) AFTER TAX	1,186,175	2,885,037	4,682,094	6,470,210	8,936,726	11,104,869	13,854,068	15,420,528	17,301,015	19,147,911

12.2 Balance Sheet

Calculations											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
<i>Current assets</i>											
Cash & Bank	662,970	1,963,100	5,366,129	9,203,087	14,126,690	18,050,093	24,262,918	31,922,914	39,376,229	46,386,475	60,547,089
Accounts receivable		1,406,295	1,531,857	1,801,062	2,108,789	2,460,051	2,860,478	3,316,390	3,737,005	4,110,706	4,521,776
Finished goods inventory		-	-	-	-	-	-	-	-	-	-
Equipment spare part inventory	12,250	15,159	18,676	22,919	28,029	34,172	41,546	47,986	55,423	64,014	-
Raw material inventory	595,873	772,507	997,048	1,281,830	1,642,251	2,097,519	2,671,577	3,232,609	3,911,456	4,732,862	-
Pre-paid building rent	450,000	495,000	544,500	598,950	658,845	724,730	797,202	876,923	964,615	1,061,076	-
Total Current Assets	1,721,093	4,652,060	8,458,211	12,907,849	18,564,604	23,366,565	30,633,722	39,396,821	48,044,729	56,355,133	65,068,865
<i>Fixed assets</i>											
Wapda Security	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000
Machinery & equipment	10,786,074	9,707,466	8,628,859	7,550,252	6,471,644	5,393,037	4,314,429	3,235,822	2,157,215	1,078,607	-
Furniture & fixtures	1,650,500	1,485,450	1,320,400	1,155,350	990,300	825,250	660,200	495,150	330,100	165,050	-
Office vehicles	1,270,000	1,016,000	762,000	508,000	254,000	2,045,348	1,636,278	1,227,209	818,139	409,070	-
Computer equipment	325,000	217,750	110,500	379,478	252,073	127,918	439,293	291,806	148,081	508,537	337,802
Office equipment	44,500	40,050	35,600	31,150	26,700	22,250	17,800	13,350	8,900	4,450	-
Total Fixed Assets	14,277,074	12,667,716	11,058,359	9,825,230	8,195,717	8,614,802	7,269,001	5,464,337	3,663,434	2,366,714	538,802
<i>Intangible assets</i>											
Pre-operation costs	95,000	76,000	57,000	38,000	19,000	-	-	-	-	-	-
Legal, licensing, & training costs	190,000	171,000	152,000	133,000	114,000	95,000	76,000	57,000	38,000	19,000	-
Total Intangible Assets	285,000	247,000	209,000	171,000	133,000	95,000	76,000	57,000	38,000	19,000	-
TOTAL ASSETS	16,283,166	17,566,777	19,725,570	22,904,079	26,893,321	32,076,367	37,978,723	44,918,157	51,746,164	58,740,847	65,607,667
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		334,670	375,222	421,492	474,450	535,256	605,306	679,536	762,211	856,240	725,018
Total Current Liabilities	-	334,670	375,222	421,492	474,450	535,256	605,306	679,536	762,211	856,240	725,018
<i>Shareholders' equity</i>											
Paid-up capital	16,283,166	16,283,166	16,283,166	16,283,166	16,283,166	16,283,166	16,283,166	16,283,166	16,283,166	16,283,166	16,283,166
Retained earnings		948,940	3,067,181	6,199,420	10,135,704	15,257,944	21,090,251	27,955,455	34,700,786	41,601,441	48,599,482
Total Equity	16,283,166	17,232,106	19,350,348	22,482,587	26,418,871	31,541,111	37,373,417	44,238,621	50,983,952	57,884,608	64,882,649
TOTAL CAPITAL AND LIABILITIES	16,283,166	17,566,777	19,725,570	22,904,079	26,893,321	32,076,367	37,978,723	44,918,157	51,746,164	58,740,847	65,607,667

12.3 Cash Flow Statement

Calculations											SMEDA
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		1,186,175	2,885,037	4,682,094	6,470,210	8,936,726	11,104,869	13,854,068	15,420,528	17,301,015	19,147,911
Add: depreciation expense		1,609,357	1,609,357	1,609,357	1,629,513	1,626,263	1,781,332	1,804,664	1,800,902	1,800,902	1,827,912
amortization of pre-operating costs		19,000	19,000	19,000	19,000	19,000	-	-	-	-	-
amortization of training costs		19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000
Accounts receivable		(1,406,295)	(125,562)	(269,205)	(307,727)	(351,262)	(400,427)	(455,912)	(420,615)	(373,701)	(411,071)
Equipment inventory	(12,250)	(2,909)	(3,517)	(4,243)	(5,110)	(6,143)	(7,374)	(6,440)	(7,438)	(8,591)	64,014
Raw material inventory	(595,873)	(176,634)	(224,542)	(284,782)	(360,421)	(455,268)	(574,058)	(561,031)	(678,848)	(821,406)	4,732,862
Pre-paid building rent	(450,000)	(45,000)	(49,500)	(54,450)	(59,895)	(65,885)	(72,473)	(79,720)	(87,692)	(96,461)	1,061,076
Accounts payable		334,670	40,552	46,270	52,958	60,806	70,050	74,230	82,675	94,028	(131,221)
Cash provided by operations	(1,058,123)	1,537,365	4,169,825	5,763,041	7,457,528	9,783,237	11,920,919	14,648,860	16,128,512	17,914,787	26,310,485
<i>Financing activities</i>											
Issuance of shares	16,283,166	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	16,283,166	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(14,562,074)	-	-	(376,228)	-	(2,045,348)	(435,531)	-	-	(504,182)	-
Cash (used for)/ provided by investing activities	(14,562,074)	-	-	(376,228)	-	(2,045,348)	(435,531)	-	-	(504,182)	-
NET CASH	662,970	1,537,365	4,169,825	5,386,813	7,457,528	7,737,889	11,485,388	14,648,860	16,128,512	17,410,606	26,310,485

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Water Expense	2% of Direct staff salaries
Communication Expenses	3% of Direct staff salaries
Traveling Expenses	10% of Administration expenses
Promotional Expenses	3% of revenue
Depreciation Method	Straight line depreciation
Depreciation Rate	10% on Machinery & Equipment 33% on Computer Equipment 10% on Furniture & Fixture 20% on vehicles
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Salaries Growth Rate	10%

13.2 Production Cost Assumptions

Description	Details
Raw Material Cost Per Kg.	
Printed Sleeves	PVC resin beads: Rs.212 Printing Ink: Rs.40 Other material: Rs.3.23
Clear Sleeves	PVC resin beads: Rs.212 Other material: Rs.3.23
Cost of Goods Sold Growth Rate (Annual)	10%

Production Wastage

Printed Sleeves: 15%

Clear Sleeves: 8%

13.3 Revenue Assumptions

Description	Details
Sale Price Growth Rate	10%
Sale Price Per Kg. Printed	Rs.810
Sale Price Per Kg. Clear	Rs.325
Sale Price Per Kg. Wastage	Rs.80
Capacity Utilization	70%
Capacity Utilization Growth Rate	5%
Maximum Capacity Utilization	100%