
Pre-Feasibility Study

PLASTIC COLLAPSIBLE TUBES MANUFACTURING UNIT



Small and Medium Enterprises Development Authority

Ministry of Industries & Production

Government of Pakistan

www.smeda.org.pk

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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 have 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 making any decision to act upon the information.

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2 EXECUTIVE SUMMARY

Plastic collapsible tubes are flexible containers used for the storage and dispensing of products that usually have a pasty consistency, such as Tooth Paste, Adhesives, Ointment, Artist Paints, Cosmetics and Viscous Liquids. The demand of plastic collapsible tubes are steadily increasing due to their extensive use in packing of multiple products.

This particular pre-feasibility study is about 'Plastic Collapsible Tubes Manufacturing' made from Polyethylene through extrusion and molding process. The unit will comprised of inhouse extrusion line and automatic tube-head moulding machine. The proposed unit can be established in Karachi, Lahore, Faisalabad or Sialkot as majority of the target customers i.e. manufacturers of cosmetics, toothpastes and ointments 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 tubes will be produced in five different sizes (i.e. 15 gm, 20 gm, 40 gm, 60-70 gm and 100-200 gm) as per the requirement of customers.

The proposed 'Plastic Collapsible Tubes Manufacturing' unit will have an installed capacity of producing 5.76 million tubes per annum, based on a single shift of 8 hours and 300 operational days. However, starting operational capacity is assumed at 60% with gradual increase of 5% in subsequent years up to maximum capacity utilization of 90% in year 7. This production capacity is estimated to be economically viable and justifies the capital and operational cost of the project. However, the entrepreneur's knowledge of the industry, competitive pricing, and strong linkage with industrial buyers are vital factors for the success of this business.

The total project cost is estimated at Rs. 79.184 million with a capital investment of Rs. 77.083 million and working capital of Rs. 2.100 million. Based on an equity finance model, the project NPV is around Rs. 11.163 million, with an IRR of 21% and Payback Period of 5.53 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 to provide fresh impetus to the economy through the development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through the 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 pre-feasibility studies in key areas of investment have been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the pre-feasibility 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 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 Plastic Collapsible Tubes Manufacturing Business by providing them with a general understanding of the business to support 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 on, which form the basis of any Investment Decision.

5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

Plastic is a synthetic or semi-synthetic organic material that can be moulded into any solid yet flexible form. The use of plastic has increased immensely in the past few years because of being malleable, resistant, durable and economical. Among many other uses, it is also used in the manufacturing of plastic collapsible tubes. Plastic collapsible tubes manufacturing business offers good return on investment with a short payback period. It can easily attain a sustainable level due to the growing domestic and export related requirements of industrial consumers.

Plastic collapsible tubes can be made up from different types of plastics, however the most commonly used material for plastic collapsible tubes is Polyethylene (PE) resin because of its various qualities, such as it is unbreakable, can be transparent to

opaque, light in weight, non-toxic and unaffected by humidity or external environment condition, chemically inert and keep the colour and flavour of the ingredients intact for longer period of time. Plastic collapsible tubes are used for packaging of a range of products which have pasty consistency, such as tooth pastes, creams, ointments, artist paints, adhesives, cosmetics and polishes. Besides that, majority of other pasty consistency items which are earlier packed in metal collapsible tubes are also switching to plastic tubes due to convenience, cost effectiveness and durability.

This particular pre-feasibility study is based on a fully automatic tubesleeve making and cutting machine along with tube printing, heading and sealing machines imported from china. The installed machines can produce plastic collapsible tubes in various lengths and widths as per the customer requirement. However, the proposed project will mainly produce the tubes in five different sizes having the capacity of 15, 25, 40, 60-70 and 100-200 grams.

The major clients of the proposed business will be manufacturer of cosmetic products, tooth paste manufacturers, pharmaceutical manufacturers, artist paint and adhesive manufacturers. The unit will primarily operate on 'Order Manufacturing Basis' for these industrial buyers. The legal status is proposed to be 'Sole Proprietorship'

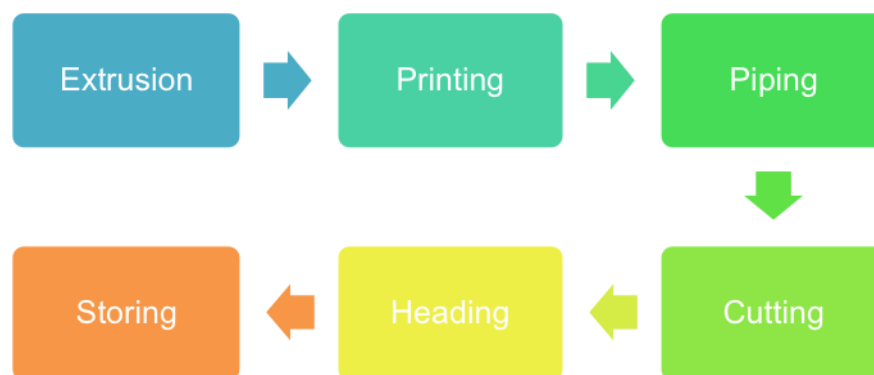
5.1 Production Process Flow

The following key processes are involved in the manufacturing of Plastic Collapsible Tube:

- Extrusion Process
- Printing
- Pipe (Sleeve) Process
- Cutting Process
- Moulding Process (for Tube Heads)

In extrusion process, PE is added to the hopper with extruding machine. The material is transferred from hopper to barrel where it is melted by applying specific temperature. When material is completely melted and converts to molten plastic form, it is passed through the die to convert it into plastic sheets. Printing of required design is made on the sheets before they are fed to the pipe making machine for conversion into sleeves of required circumference. The sleeves are cut into the required sizes and tube heads are attached to it using an automated heading machine.

The tube heads are produced through moulding process. In this process plastic granules are added to injection moulding machines to produce the required sizes of tube heads.

Figure 1: Production Process

5.2 Proposed Product Mix

The product mix would include tubes of different volumes. Detailed production mix is given in the table below:

Table 1: Product Mix

Tube Sizes	Production Percentage
15 grams	10%
25 grams	25%
40 grams	30%
60-70 grams	25%
100-200 grams	10%

5.3 Installed and Operational Capacity

The proposed unit will have installed capacity of producing 5.76 million plastic tubes per annum, based on a single shift of 8 hours and 300 operational days. However, starting operational capacity is assumed at 60% with gradual increase of 5% in subsequent years up to maximum capacity utilization of 90% in 7th year of operation.

Table 2: Installed and Operational Capacity (No. of Tubes)

Tube Sizes	Total Installed Capacity	Operational Capacity 60 % (Year 1)	Maximum Capacity 90% (Year 7)
15 grams	576,000	345,600	518,400
25 grams	1,440,000	864,000	1,296,000
40 grams	1,728,000	1,036,800	1,555,200

60-70 grams	1,440,000	864,000	1,296,000
100-200 grams	576,000	345,600	518,400
Total	5,760,000	3,456,000	5,184,000

6 CRITICAL FACTORS

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

- ⇒ Prior knowledge and information about the plastic industry, especially plastic extrusion and molding process.
- ⇒ Selection of appropriate plant, machinery and moulds.
- ⇒ Selection of quality polyethylene 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 collapsible tubes 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

The Plastic collapsible tubes manufacturing is amongst the growing segments in Pakistan. The unit will be making direct supplies to its potential customers, mainly industrial manufacturers of cosmetics, toiletries, creams, lotions, polishes, car cleaners, pigments and artist paint & colors, etc. 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 analyze the commercial viability of Plastic Collapsible Tubes. Various cost and revenue related assumptions along with the 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 the estimated sales of Rs. 52.531 million in the year one. The capacity utilization during year one is worked out at 60%.

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

Table 3: Project Economics (Equity Financed)

Description	Details
Internal Rate of Return (IRR)	21%
Payback Period (Yrs.)	5.53
Net Present Value (Rs.)	11,162,607

Calculation of break-even analysis is as follows:

Table 4: 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	29,899,836	32,017,612	34,383,178	37,067,132	40,009,810	42,897,681	46,620,884	50,074,777	53,882,727	58,128,049
Break-Even Units	1,993,322	1,940,461	1,894,390	1,856,606	1,821,816	1,775,739	1,754,418	1,713,085	1,675,779	1,643,464
Margin of Safety	43%	49%	54%	58%	61%	64%	67%	67%	68%	69%

However, for 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 provided in the table below:

Table 5: Project Economics Based on Debt (50%):Equity (50%)

Description	Details
Internal Rate of Return (IRR)	21%
Payback Period (Yrs.)	5.45
Net Present Value (Rs.)	25,291,252

The financial assumptions for Debt: Equity is as follows:

Table 6: Financial Assumptions for Debt: Equity Model

Description	Details
Debt (50%)	39,690,876
Equity (50%)	39,690,876
Interest Rate on Debt	12%
Debt Tenure (Years)	5
Debt Payment / Year	1

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 7: Project Cost

Description	Amount Rs.
Capital Cost	
Land	18,000,000
Building / Infrastructure	36,003,150
Machinery & Equipment	19,532,762

Furniture & Fixtures	632,500
Office Vehicles	1,076,240
Office Equipment	266,000
Wapda Security	194,970
Pre-Operating Costs	1,377,500
Total Capital Cost	77,083,122
Raw Material Inventory	1,168,512
Equipment Spare Part Inventory	18,000
Cash	913,886
Total Working Capital	2,100,398
Total Project Cost	79,183,520

9.3 Land and Building Requirement

Approximately 6 Kanals of land would be required for establishment of proposed unit. It is recommended that required land should be procured in the industrial estates of identified city / area. The cost of land is estimated at the rate of Rs. 3 million per kanal.

The infrastructural requirements of the project mainly comprise the construction of various facilities including management's office, production hall, raw material store, finished goods store and open space, etc. Details of space requirement and cost related to land & building are given in the below table:

Table 8: Infrastructure Requirements

Description	Estimated Area (Sq. ft.)	Unit Cost (Rs.)	Total Cost (Rs.)
Owner/Manager Office	168	2,500	420,000
Accounts/Supervisor	72	2,500	180,000
Production Hall	13,788	2,200	30,333,600
Store Raw Material	400	2,200	880,000
Store Finished Goods	625	2,200	1,375,000
Stores and Spares Room	400	2,200	880,000
Wash Rooms	108	2,200	237,600

Security Guard Room	120	2,200	264,000
Car Parking	144	800	115,200
Open Area	11,175	50	558,750
Boundary Wall With Gate			759,000
Total Construction Cost			36,003,150
Total cost of Land			18,000,000
Total Cost			54,003,150

9.4 Machinery & Equipment Requirement

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

Table 9: Machinery & Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Pipe Making and Cutting	1	6,396,441	6,396,441
PE Tube Printing Machine	1	4,270,961	4,270,961
Generator	1	3,000,000	3,000,000
Heading Machine	1	2,719,360	2,719,360
Installation Charges	1	1,400,000	1,400,000
Transformer	1	811,000	811,000
Sealing and Capping Machine	1	635,000	635,000
Sunway Foil Sealed Machinery for Plastic Tube Cap Machine "	1	275,000	275,000
Security Equipment's	1	25,000	25,000
Total			19,532,762

9.5 Furniture & Fixtures Requirement

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

Table 10: Furniture & Fixture

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Table & Chairs CEO Office	1	35,000	35,000
Sofas	4	12,000	48,000

Table & Chairs Accounts and Supervisor	2	30,000	60,000
Visitor Chairs	8	6,625	53,000
Workstations	1	22,000	22,000
Cupboard/Racks	3	13,000	39,000
Miscellaneous Furniture	1	50,000	50,000
Bracket Fans	28	3,800	106,400
Exhaust Fans	3	2,200	6,600
Industrial Exhaust Fans	3	35,000	105,000
LED Bulbs (18 Watts)	45	1,000	45,000
Air conditioner (1 ton Split)	1	62,500	62,500
Total			632,500

9.6 Office Equipment Requirement

Following computer & office equipment will be required for the project are given below:

Table 11 : Office Equipment Requirements

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Computers	3	70,000	210,000
Computer printer (s)	1	23,000	23,000
Scanner	1	9,500	9,500
Water Dispenser	3	19,000	19,000
Telephones	3	1,500	4,500
Total			266,000

9.7 Office Vehicles Requirement

Following office equipment will be required for the project are given below:

Table 12 : Office Vehicles Requirement

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
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Suzuki Ravi	1	1,076,240	1,076,240
Total			1,076,240

9.8 Raw Material Requirement

Polyethylene Plastic (PE) along with printing ink and warmish 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 plastic collapsible tubes manufacturing unit.

Table 13: Raw Material Requirements (Year 1)

Description	Raw Material Required (Kg)	Unit Cost (Rs / Kg)	Total Raw Material Cost (Rs.)
Polyethylene (PE) Resin	91,648	216	19,795,968
Ink and Warmish	3,667	2,250	8,248,320
Total			28,044,288

9.9 Human Resource Requirement

In order to run operations of Plastic Collapsible Tubes Manufacturing unit smoothly, details of human resources required along with number of employees and monthly salaries are recommended as under.

Table 14: Human Resource Requirement

Description	No. of Employees	Monthly Salary per person (Rs.)
Owner	1	80,000
Supervisor/Accountant	1	50,000
Designer	1	45,000
Pipe making and Cutting Machine Operators	2	35,000
Helpers	5	20,000
Sealing and Capping Machine Operators	2	35,000
Printing Machine Operators	1	35,000
Marketing Executives	2	30,000
Plastic Sheet Extrusion Machine Operator	1	20,000

Security Guards	3	17,500
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. 261,072 (Direct and In-Direct) per month. Furthermore, promotional expense being essential for marketing of Plastic Collapsible Tubes is estimated as 0.5% of revenue.

9.11 Revenue Generation

Based on the capacity utilization of 60%, sales revenue during the first year of operations is estimated as under.

Table 15: Revenue Generation – Year 1

Plastic Tube Sizes	No of Tubes Sold Year 1	Sales Price per Unit (Rs.)	Sales Revenue (Rs.)
15 grams	345,600	10	3,456,000
25 grams	864,000	12	10,368,000
40 grams	1,036,800	15	15,552,000
60-70 grams	864,000	18	15,552,000
100-200 grams	345,600	22	7,603,200
Total			52,531,200

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of private sector Service Providers relevant to the proposed project be given.

Table 16: Machinery Suppliers

Name of Supplier	Phone	Website	Address
Guangzhou Sunway Industrial Co., Ltd.	86-20-36012946	http://www.sunway-cn.com	Floor 3, Building 5, No. 25 Tangli Road, Jianggao Town, Guangzhou, Guangdong, China.

Shenzhen Hengxing Packaging Machine Co., Ltd.	86-755-28179955	https://www.szhexstar.com	Ab-3, Factory Building, Huadong Industrial Park, Hezhou Community, Shenzhen, Guangdong, China.
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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
Ministry of Education, Training & Standards in Higher Education	http://moptt.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 Balochistan	www.balochistan.gov.pk
Government of Gilgit Baltistan	www.gilgitbaltistan.gov.pk
Government of Azad Jamu 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
Quaid-e-Azam Industrial Estate	www.qie.com.pk
Punjab Vocational Training Council (PVTC)	www.pvtc.gop.pk
Pakistan Plastic Manufacturers Association	www.pakplas.com.pk
Punjab Industrial Estate Management and Development Company (PIEMDC)	www.pie.com.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.pk

Pakistan Plastic Manufacturers Association	www.pakplas.com.pk
Pakistan Chemical Manufacturers Association	www.pcma.org.pk
Pakistan Pharmaceutical Manufacturers' Association	www.ppma.org.pk

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	52,531,200	62,599,680	74,156,544	87,398,784	102,547,907	119,852,866	139,593,338	153,552,672	168,907,939	185,798,733	
<i>Cost of sales</i>											
Raw Material Cost	28,044,288	33,419,443	39,589,187	46,658,684	54,746,189	63,984,609	74,523,250	81,975,575	90,173,133	99,190,446	
Direct labour cost	2,325,600	2,771,340	3,282,972	3,869,217	4,539,881	5,305,986	6,179,913	6,797,905	7,477,695	8,225,465	
Machinery Maintenance	432,000	514,800	609,840	718,740	843,322	985,632	1,147,972	1,262,769	1,389,046	1,527,950	
Direct Electricity	3,016,742	3,594,951	4,258,635	5,019,105	5,889,083	6,882,866	8,016,515	8,818,166	9,699,983	10,669,981	
Total cost of sales	33,818,630	40,300,535	47,740,633	56,265,746	66,018,476	77,159,093	89,867,650	98,854,415	108,739,857	119,613,842	
Gross Profit	18,712,570	22,299,145	26,415,911	31,133,038	36,529,431	42,693,772	49,725,688	54,698,257	60,168,082	66,184,890	
<i>General administration & selling expenses</i>											
Administration expense	3,510,000	3,861,000	4,247,100	4,671,810	5,138,991	5,652,890	6,218,179	6,839,997	7,523,997	8,276,396	
Administration benefits expense	351,000	386,100	424,710	467,181	513,899	565,289	621,818	684,000	752,400	827,640	
Electricity expense	116,123	127,736	140,509	154,560	170,016	187,018	205,719	226,291	248,921	273,813	
Water expense	46,512	55,427	65,659	77,384	90,798	106,120	123,598	135,958	149,554	164,509	
Travelling expense	280,800	308,880	339,768	373,745	411,119	452,231	497,454	547,200	601,920	662,112	
Communications expense (phone, fax, mail, internet, etc.)	232,560	277,134	328,297	386,922	453,988	530,599	617,991	679,790	747,770	822,546	
Office vehicles running expense	322,872	355,159	390,675	429,743	472,717	519,989	571,987	629,186	692,105	761,315	
Office expenses (stationary, entertainment, janitorial services, etc.)	69,768	83,140	98,489	116,077	136,196	159,180	185,397	203,937	224,331	246,764	
Promotional expense	262,656	312,998	370,783	436,994	512,740	599,264	697,967	767,763	844,540	928,994	
Professional fees (legal, audit, consultants, etc.)	262,656	312,998	370,783	436,994	512,740	599,264	697,967	767,763	844,540	928,994	
Depreciation expense	4,114,307	4,114,307	4,114,307	4,129,346	4,126,921	4,258,332	4,275,741	4,272,934	4,272,934	4,293,088	
Amortization of pre-operating costs	275,500	275,500	275,500	275,500	275,500	-	-	-	-	-	
Bad debt expense	525,312	625,997	741,565	873,988	1,025,479	1,198,529	1,395,933	1,535,527	1,689,079	1,857,987	
Miscellaneous expense 1	280,800	308,880	339,768	373,745	411,119	452,231	497,454	547,200	601,920	662,112	
Subtotal	10,650,866	11,405,256	12,247,914	13,203,987	14,252,223	15,280,935	16,607,208	17,837,547	19,194,008	20,706,269	
Operating Income	8,061,704	10,893,889	14,167,997	17,929,050	22,277,208	27,412,838	33,118,480	36,860,710	40,974,074	45,478,621	
Other income (interest on cash)	112,146	317,848	552,037	798,542	1,045,958	1,307,560	1,612,241	1,933,779	2,250,196	2,711,178	
Other income 2	-	-	-	-	-	-	-	-	-	-	
Gain / (loss) on sale of computer equipment	-	-	60,625	-	-	130,806	-	-	212,049	169,289	
Gain / (loss) on sale of office vehicles	-	-	-	-	430,496	-	-	-	-	-	
Earnings Before Interest & Taxes	8,173,849	11,211,738	14,780,659	18,727,593	23,753,662	28,851,204	34,730,721	38,794,488	43,436,320	48,359,088	
Earnings Before Tax	8,173,849	11,211,738	14,780,659	18,727,593	23,753,662	28,851,204	34,730,721	38,794,488	43,436,320	48,359,088	
Tax	1,980,847	3,044,108	4,293,230	5,674,657	7,433,781	9,217,921	11,275,752	12,698,071	14,322,711	16,045,680	
NET PROFIT/(LOSS) AFTER TAX	6,193,002	8,167,630	10,487,429	13,052,936	16,319,881	19,633,283	23,454,969	26,096,418	29,113,608	32,313,408	

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	913,886	8,057,761	17,370,109	26,792,854	37,090,532	46,586,119	58,018,696	70,960,554	83,741,742	96,273,955	120,620,290
Accounts receivable		2,158,816	2,365,703	2,810,059	3,319,630	3,903,014	4,569,879	5,331,086	6,023,548	6,625,903	7,288,493
Equipment spare part inventory	18,000	22,523	28,015	34,668	42,711	52,414	64,100	74,035	85,511	98,765	-
Raw material inventory	1,168,512	1,531,724	1,995,955	2,587,613	3,339,746	4,293,661	5,500,937	6,656,134	8,053,922	9,745,245	-
Total Current Assets	2,100,398	11,770,825	21,759,781	32,225,194	43,792,618	54,835,208	68,153,611	83,021,809	97,904,722	112,743,868	127,908,783
<i>Fixed assets</i>											
Land	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000
Building/Infrastructure	36,003,150	34,202,993	32,402,835	30,602,678	28,802,520	27,002,363	25,202,205	23,402,048	21,601,890	19,801,733	18,001,575
Wapda Security	194,970	194,970	194,970	194,970	194,970	194,970	194,970	194,970	194,970	194,970	194,970
Machinery & equipment	19,532,762	17,579,486	15,626,210	13,672,933	11,719,657	9,766,381	7,813,105	5,859,829	3,906,552	1,953,276	-
Furniture & fixtures	632,500	569,250	506,000	442,750	379,500	316,250	253,000	189,750	126,500	63,250	-
Office vehicles	1,076,240	860,992	645,744	430,496	215,248	1,733,295	1,386,636	1,039,977	693,318	346,659	-
Computer equipment	242,500	162,475	82,450	283,149	188,085	95,446	327,780	217,732	110,491	379,447	252,052
Office equipment	23,500	21,150	18,800	16,450	14,100	11,750	9,400	7,050	4,700	2,350	-
Total Fixed Assets	75,705,622	71,591,315	67,477,009	63,643,426	59,514,080	57,120,455	53,187,096	48,911,355	44,638,421	40,741,685	36,448,597
<i>Intangible assets</i>											
Pre-operation costs	1,377,500	1,102,000	826,500	551,000	275,500	-	-	-	-	-	-
Total Intangible Assets	1,377,500	1,102,000	826,500	551,000	275,500	-	-	-	-	-	-
TOTAL ASSETS	79,183,520	84,464,140	90,063,290	96,419,620	103,582,199	111,955,663	121,340,707	131,933,164	142,543,144	153,485,553	164,357,380
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		326,218	382,144	448,056	525,895	618,012	727,256	841,724	956,153	1,088,370	752,204
Other liabilities											
Total Current Liabilities	-	326,218	382,144	448,056	525,895	618,012	727,256	841,724	956,153	1,088,370	752,204
<i>Shareholders' equity</i>											
Paid-up capital	79,183,520	79,183,520	79,183,520	79,183,520	79,183,520	79,183,520	79,183,520	79,183,520	79,183,520	79,183,520	79,183,520
Retained earnings		4,954,402	10,497,625	16,788,043	23,872,783	32,154,131	41,429,931	51,907,920	62,403,470	73,213,663	84,421,656
Total Equity	79,183,520	84,137,922	89,681,146	95,971,563	103,056,303	111,337,651	120,613,451	131,091,440	141,586,990	152,397,183	163,605,176
TOTAL CAPITAL AND LIABILITIES	79,183,520	84,464,140	90,063,290	96,419,620	103,582,199	111,955,663	121,340,707	131,933,164	142,543,144	153,485,553	164,357,380

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		6,193,002	8,167,630	10,487,429	13,052,936	16,319,881	19,633,283	23,454,969	26,096,418	29,113,608	32,313,408
Add: depreciation expense		4,114,307	4,114,307	4,114,307	4,129,346	4,126,921	4,258,332	4,275,741	4,272,934	4,272,934	4,293,088
amortization of pre-operating costs		275,500	275,500	275,500	275,500	275,500	-	-	-	-	-
Accounts receivable		(2,158,816)	(206,887)	(444,356)	(509,571)	(583,384)	(666,865)	(761,207)	(692,462)	(602,355)	(662,590)
Equipment inventory	(18,000)	(4,523)	(5,492)	(6,653)	(8,043)	(9,703)	(11,685)	(9,935)	(11,475)	(13,254)	98,765
Raw material inventory	(1,168,512)	(363,212)	(464,230)	(591,658)	(752,133)	(953,915)	(1,207,276)	(1,155,197)	(1,397,788)	(1,691,324)	9,745,245
Accounts payable		326,218	55,926	65,912	77,839	92,116	109,244	114,468	114,429	132,217	(336,166)
Cash provided by operations	(1,186,512)	8,382,476	11,936,754	13,900,480	16,265,874	19,267,416	22,115,032	25,918,838	28,382,056	31,211,826	45,451,748
Issuance of shares	79,183,520	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares											
Cash provided by / (used for) financing activities	79,183,520	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(77,083,122)	-	-	(280,724)	-	(1,733,295)	(324,973)	-	-	(376,197)	-
Acquisitions											
Cash (used for)/ provided by investing activities	(77,083,122)	-	-	(280,724)	-	(1,733,295)	(324,973)	-	-	(376,197)	-
NET CASH	913,886	8,382,476	11,936,754	13,619,755	16,265,874	17,534,120	21,790,059	25,918,838	28,382,056	30,835,629	45,451,748

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Communication Expense	10% of Direct Staff Salaries
Promotional Expenses	0.5% of Revenue
Travelling Expense	8% of Administration Expense
Depreciation Method	Straight Line Depreciation
Depreciation Rate	5% on Building / Infrastructure 10% on Machinery & Equipment 33% on Computer Equipment 10% on Furniture & Fixture 20% on Office Vehicle
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Salaries Growth Rate	10%

13.2 Capacity Utilization Assumptions

Description	Details
Raw Material Cost Per Tube	
Plastic Tube 15 grams	PE Resin: Rs. 1.92 Ink and Warmish: Rs. 0.8
Plastic Tube 25 grams	PE Resin: Rs. 3.20 Ink and Warmish: Rs. 1.33
Plastic Tube 40 grams	PE Resin: Rs. 5.12 Ink and Warmish: Rs. 2.13
Plastic Tube 60-70 grams	PE Resin: Rs. 7.68 Ink and Warmish: Rs. 3.20

Plastic Tube 100-200 grams	PE Resin: Rs. 12.80 Ink and Warmish: Rs. 5.33
Cost of Good Sales Growth Rate (Annual)	10%
Production Wastage	8%

13.3 Revenue Assumptions

Description	Details
Sales Price Per Tube:	
Plastic Tube 15 grams	Rs.10
Plastic Tube 25 grams	Rs.12
Plastic Tube 40 grams	Rs.15
Plastic Tube 60-70 grams	Rs.18
Plastic Tube 100-200 grams	Rs.22
Sale Price Growth Rate	10%
Hours Operational / Day	8
Days Operational / Year	300