



Pre-feasibility Study

POLYPROPYLENE WOVEN BAGS MANUFACTURING UNIT

June 2022

“The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, and revenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA’s website and consult financial experts to stay current with market conditions.”

Small and Medium Enterprises Development Authority
Ministry of Industries and 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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www.smeda.org.pk

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For information	Provincial Chief (Sindh) mkumar@smeda.org.pk

2 EXECUTIVE SUMMARY:

Polypropylene Woven Bags Manufacturing Unit is proposed to be located at semi-urban areas. Products include **Polypropylene Woven Bags**, at initial capacity utilization of **90%** on 02-shift basis.

The total project cost for setting up a Polypropylene Woven Bags Manufacturing Unit is estimated at **Rs. 295 million** out of which **Rs. 163 million** is capital cost and **Rs.131.7 million** is working capital. The project is proposed to be **100%** on equity basis. The NPV is projected around **Rs. 133 million** with an IRR of **34%** and a Payback Period of **4** years.

The most critical consideration or factors for success of the project are:

- Most significant considerations
 - Availability of continuous power supply
 - Securing a regular source of raw material at competitive prices
 - Machine operators with technical knowledge.
 - Credit Recovery
- Equally important factor
 - Background Experience
 - Marketing Skill
 - Product size and quality with respect to market demand

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 **Polypropylene Woven Bags 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 on, which form basis of any Investment Decision.

5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

Polypropylene woven bags manufacturing unit either import polypropylene granules or purchase from the local suppliers, convert into tape yarn where this tape yarn is woven on an automatic loom to produce polypropylene cloth. It is used to store and transport industrial and agricultural products like fertilizers, sugar, pigments, maize, plastic granules, rice, flours, pulses, polymers etc. Polypropylene sacks are usually suitable for packing most of the goods that have been traditionally packed in jute bags.

Polypropylene bags are suitable for almost all the products and are better suited for storage purposes due to their strength, durability and ability to withstand water and pests. The use of polypropylene bags are steadily increasing in the agricultural sector, with increasing agricultural yields and related industries, the scope of the industry is increasing.

Plastic Industry of Pakistan¹

Pakistan's economy achieved an impressive GDP growth rate during the last three decades. Pakistan's plastic industry is thriving at an average annual growth rate of 15% with a total estimated production capacity of 750,000 M/T per annum. Adding further strength to the industrial progress, Pakistan has established successful export markets for its plastic goods.

Its contribution to the Gross Domestic Product (GDP) was 1.69%. The per capita consumption of plastic in Pakistan is 7.5 kg. There are some 6,000 plastic product manufacturers in the country and 500,000 people are directly and indirectly involved with this business.

Pakistan's plastic industry shows an upward trend in terms of exports. According to data released by Pakistan Bureau of Statistics (PBS), in February, Pakistan exported plastic products worth \$46.730 million as compared to the previous month when exports were at \$33.338 million. Plastic products exports in the same month of last year were \$23.617 million².

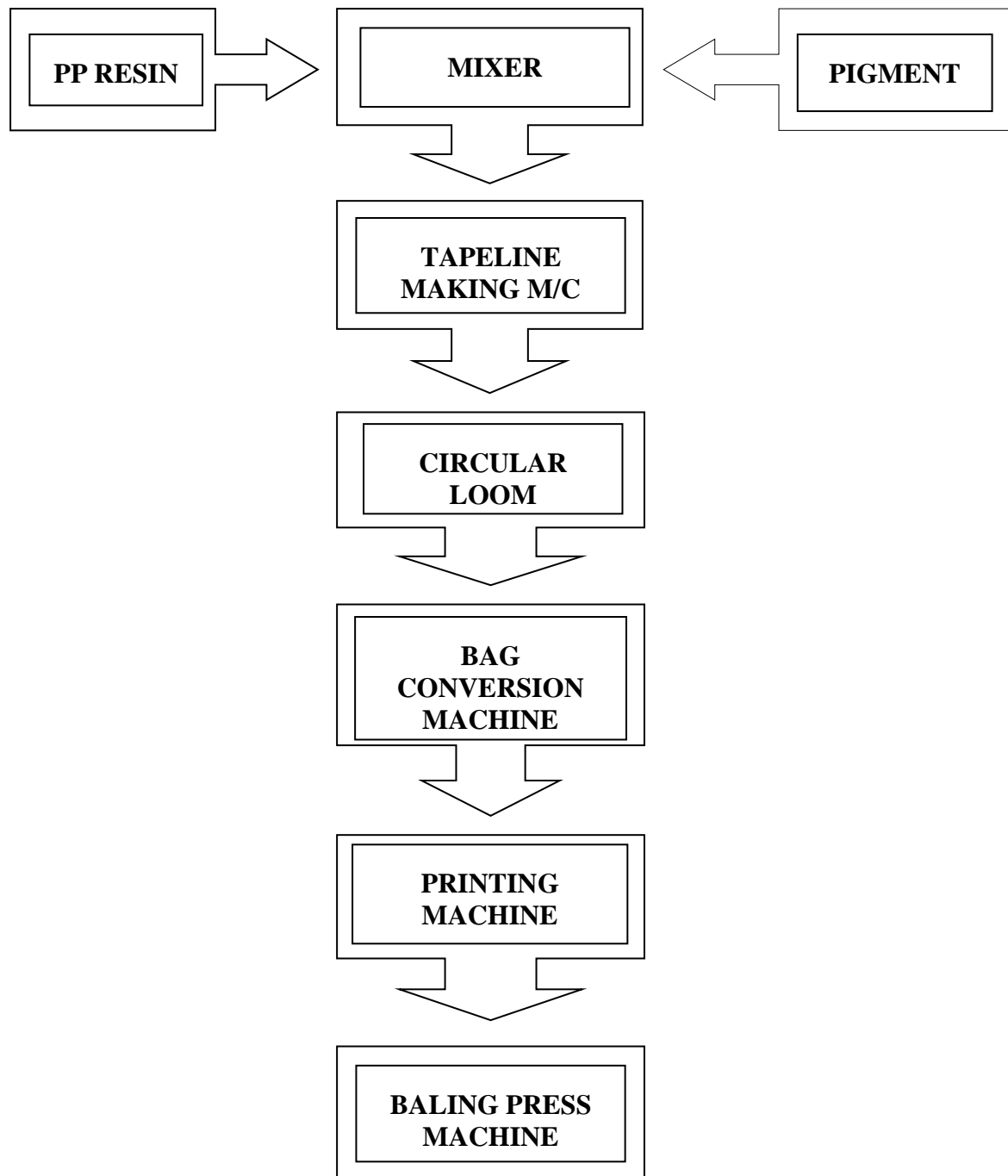
Rapid innovation and improvement in science and technology has led to the development of more and more products that were previously unheard of in the world. The vulcanization process helped in the rapid development of plastic. The global size of the plastic market was about \$580 billion in 2020. Currently, Pakistan has a fully established world-class plastic industry equipped with the latest technology. It comprises over 11,000 small, medium and large units.

¹ Plastic, Packing & Print Asia 2022 (<http://plastpackasia.com.pk/>)

² PBS

Following key parameters must be addressed as per pre-feasibility study under preparation:

- **Technology:** The polypropylene tapes are manufactured by slitting films of PP (Polypropylene) or HDPE (High Density Polyethylene) which are produced by blown extrusion technique. In this process, the granules of plastic are fed to the extruder through the hopper. Molten plastics are extruded through circular die and the tube is inflated by blowing with air to a desired diameter, and pulling it away with a pair of nip rolls.
From bobbins carrying polypropylene yarn, fabric is made using warping and yarn winding machine. The fabric is then woven on looms and finally cut to size and stitched to bags of required dimensions. Whenever required, the bags are screen-printed using specially prepared ink. In some cases, laminated bags are required and as such before stitching and printing the fabric has to be laminated by extrusion coating of LDPE (Low Density Polyethylene). Lamination should be done from outside.
- **Location:** The unit is proposed to be established as a manufacturing facility at a location where utilities, infrastructure and other provisions essential for the production process are conveniently available such as industrial zones in Karachi, Hub, Hyderabad, Lahore, Gujranwala, Multan, Rawalpindi and Peshawar, Sukkur etc.
- **Product:** Product line-up involves woven bags of various sizes, fabric can also be made by slitting one side of the woven fabric which is in the form of a tube. This fabric is used for packing purposes in the textile industry and especially for export products. There is also a market for polypropylene bags like shopping bags and luggage bags made from polypropylene which are often used. However the main product mix of the company will consist of 10kg, 50 kg and 100 kg bags.
- **Target Market:** Target segment will be any producers, distributors and manufacturers of agricultural goods, industrial goods that can be packed in polypropylene bags. Major target customers can be from the sugar, rice, wheat, cotton, fertilizer, chemicals and other industries. The production line can be expanded further to cater to the cement industry as well but this will require some expansion in the production line and additional machinery will be needed.
- **Employment Generation:** Proposed project will provide direct employment to 39 people approximately. Financial analysis shows the unit shall be profitable from the very first year of operation.

5.1 Production Process Flow:

5.2 Installed and Operational Capacities

Our proposed plant under consideration will have an installed production capacity of 19.17 million bags per annum. Different sizes of bags can be made to meet the demands of particular customers. For instance bags of 10 kg, 50 kg, 100 kg etc. are possible by carrying out the required adjustment of the equipment. The average order size in the industries like sugar, rice, fertilizers wheat, seeds etc. ranges between 200,000 to 300,000 bags. We estimate that 16 looms plant can easily meet the annual requirements of selected buyers.

6 CRITICAL FACTORS

Main critical success factors that affect the decision to invest in the proposed business setup are:

- Critical success factors would be the maintenance of product quality and standards since the core issue in packaging material is that it should be effective in protecting the contents from the environment.
- Maintaining quality control and following of the product specifications are key points for any product. Securing a regular source of polypropylene granules at competitive rates will also be an advantage.
- Availability of continuous electric and water supply.

Marketing:

Marketing of project would be dependent on core of industrial tactics as to be applied based on respective dynamics, knowing competitors as there are a number of manufacturers already in the industry. Substantial experience in polypropylene woven bags would definitely be a major advantage when it comes to marketing/trading.

Pricing:

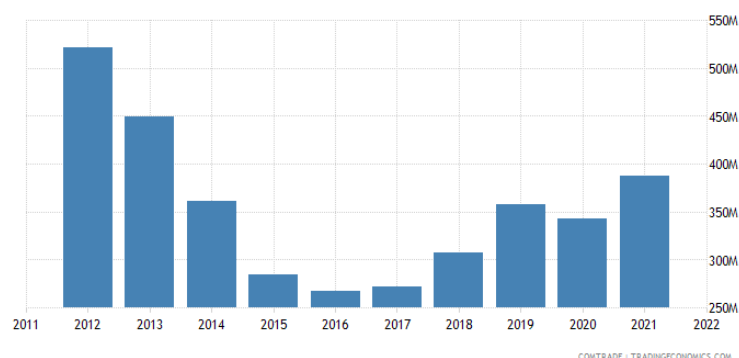
Pricing would be based on the market rates and would be dependent on the world price of polypropylene which is in turn linked with the world oil prices. Pricing would have to be competitive in order to attract a steady clientele. Having contact with buyers is crucial part of setup as it is the topmost priority in-between manufacturing.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT:

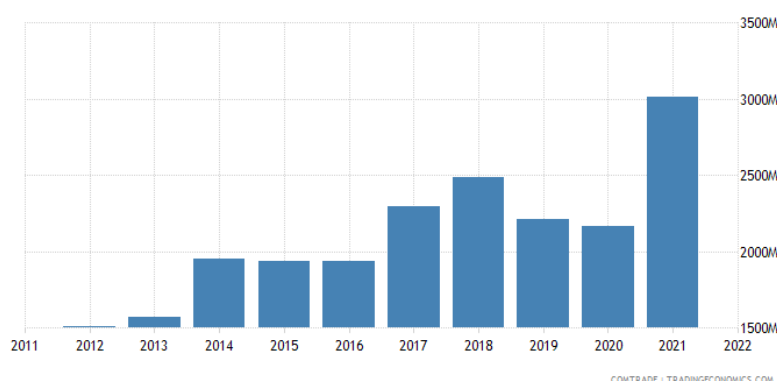
Plastic industry in Pakistan is expanding at an average annual growth of 15%. The year-on-year (YoY) data also shows a positive trend. In the current fiscal year, exports of plastic materials increased up to \$266.642 million (July-February 2021-2022) as compared to the same period of last year when exports were at \$209.533 million. Plastic industry is contributing more than Rs. 7.5 billion annually to the national exchequer in shape of custom duty, sales tax and income tax.³

Plastic consumption has traditionally been the highest in USA, Europe and Japan amounting to 75% of global consumption. This is primarily due to a spread-out effect as consumption in other parts of the world has increased. Consumption in China, Taiwan, Korea, Thailand, Malaysia and India has increased manifold during the last few years. In addition to domestic consumption, these countries have become leading exporters of plastic products to USA, Europe, Japan and other regions. The reason for this shift is the comparatively low cost of production in these countries.

Pakistan Exports of plastics was US\$388.03 Million during 2021, according to the United Nations COMTRADE database⁴ on international trade. Pakistan Exports of plastics is given below,



Whereas, Pakistan Imports of Plastics and articles was US\$3.01 Billion during 2021, according to the United Nations COMTRADE database on international trade. Pakistan imports of Plastics and articles are given below in chart.



³ PITAD & Plastic, Packing & Print Asia 2020 (<http://plastpackasia.com.pk/>)

⁴ COMTRADE Database, ITCN

8 POTENTIAL TARGET CUSTOMERS / MARKETS

MARKET POTENTIAL

Market for plastic materials is growing rapidly due to varied and rising use of plastic goods over recent years, substituting wood, tin, aluminum, glass, china clay, etc. Target customers will be any producers, distributors and manufacturers of agricultural goods, industrial goods that can be packed in polypropylene bags. Major target customers can be from the sugar, rice, wheat, cotton, fertilizer, chemicals and other industries. The production line can be expanded further to cater to the cement industry as well but this will require some expansion in the production line and additional machinery will be needed.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of this project. Various costs and revenue related assumptions along with results of the analysis are outlined in this section.

9.1 Project Economics

All the figures in this financial model have been calculated for estimated Production of 19.12 million in the year one. The capacity utilization during year one is worked out at 90% in subsequent years up to the maximum capacity utilization.

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

9.1.1 Project Economics

Description	Details
Internal Rate of Return (IRR)	34%
Payback Period (yrs.)	4.13
Net Present Value (Rs.)	133,002,132

9.2 Project Financing

Following table provides details of the equity required and variables related to bank loan:

9.2.1 Project Financing

Description	Details
Total Equity (100%)	Rs. 294,909,193

9.3 Project Cost

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

9.3.1 Project Cost

Description	Amount (Rs.)
Capital Cost	
Plant and Machinery	156,184,000
Furniture & Fixture	623,500
Office Equipment	411,000
Pre-operating Cost	5,996,000
Total Capital Cost	163,214,500
Working Capital	
Raw Material Inventory	116,564,573
Up-front Building Rent (06 months security deposit + 06 months advance rent)	5,040,000
Cash	1,500,000
Upfront insurance payment	7,809,200
Equipment spare part inventory	780,920
Total Working Capital	131,694,693
Total Project Cost	294,909,193

9.4 Space requirement

Table 9.4: Space Requirement

Description	Estimated Area (Sqft)	Monthly Rent (Rs.)
Management and Production	35,000	420,000

9.5 Machinery & Equipment Requirement

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

9.5.1 Machinery & Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Tapeline Capacity: 260 KG/Hr. (6Tons/Day)*	01	56,000,000	56,000,000
Circular Loom ;Speed-150 meter/Hour 1100ppm*	16	2,250,000	36,000,000
Bag Conversion system*	01	5,700,000	5,700,000
6 Color Printing Machine (Imported)*	01	13,000,000	13,000,000
Hydraulic Bailing Press*	01	2,200,000	2,200,000
Cheese Tubes*	30,000	150	4,500,000
Others	-	-	1,000,000
Installation/Duty/Withholding/Sales Tax	-	-	30,784,000
Genset (500 KVA)*	01	7,000,000	7,000,000
Total			156,184,000

**The above price details are of new plant, machinery & equipment*

(TRADE POLYMERZ COMPANY)

9.6 Furniture & Fixtures Requirement

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

9.6.1 Furniture & Fixture

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Table and Chair set (Executive)	01	50,000	50,000
Table and Chair set (Normal)	07	20,000	140,000

Cabinets (Whole Closet)	08	12,000	96,000
Curtains/Interior Decor	01	50,000	50,000
Air Conditioner (Split Unit)	01	155,000	155,000
Chairs and stools	30	4,000	120,000
Electric wiring and lighting	25	500	12,500
Total			623,500

9.7 Office Equipment Requirement

Details of the office equipment required for the project are given below:

9.7.1 Office Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Desktop Computers with UPS/Laptops	03	50,000	150,000
Printer	02	35,000	70,000
Scanner	01	15,000	15,000
CCTV Systems	01	150,000	150,000
Steel Safe	01	20,000	20,000
Telephones	03	2,000	6,000
Total			620,000

9.8 Office Vehicle Requirement

Considering more efficient and viable option regarding mobility; vehicle service is to be outsourced for matter of transportation of raw material and delivering finished good inventory.

9.9 Human Resource Requirement

In order to run operations of Polypropylene bags smoothly, details of human resources required along with number of employee and monthly salaries are recommended as under:

9.9.1 Human Resource Requirement

Description	No. of Employees	Monthly Salary per person (Rs)	Total Monthly Salary (Rs)
Owner/ Manager (Single shift)	01	80,000	80,000
Production Manager	01	60,000	60,000
Accounts and Admin. (Single shift)	01	40,000	40,000
Shift In-charge (Production)	01	35,000	35,000
Extruder Operator	01	20,000	20,000
Fitter (Operator)	01	20,000	20,000
Winder Operator	01	20,000	20,000
Circular Loom Workers	12	20,000	240,000
Foreman (Loom)	01	28,000	28,000
Operator Cutting and Finishing Machine	02	20,000	40,000
Operator Printing Machine	01	20,000	20,000
Electric Supervisor	01	35,000	20,000
Electricians	01	20,000	20,000
Store Keeper (Single shift)	02	20,000	40,000
Helpers	06	20,000	120,000
Peon (Single shift)	02	20,000	40,000
Guards	04	20,000	80,000
Total	39		923,000

9.10 Utilities and other costs

An essential cost to be borne by the project is the cost of electricity. The direct and indirect electricity expenses are estimated to be around Rs. 3,320,100 and Rs. 15,275,520 respectively in the first year.

9.11 Revenue Generation

Based on the capacity utilization of 90% for polypropylene bags respectively, sales revenue during the first year of operations is estimated as under:

9.11.1 Revenue Generation – Year 1

Description	No. of Units Produced 100 gm (No.)	Finished Goods Inventory 100 gm (No.)	Units available for Sale 100 gm (No.)	Sale Price / unit 100 gm (Rs.)	Sales Revenue 100 gm (Rs.)
PP woven bags	17,252,352	431,309	16,821,043	36	605,557,555

10 CONTACT DETAILS

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

10.1 Machinery Suppliers**Machinery Supplier - 1**

Company Name	Trade Polymerz (Pvt) Ltd.		
Contact Person	Mr. Khuram		
Address	703, 7 th Floor, Tahir Plaza, Block 7-8, K.C.H.S Shahra-e-Faisal, Karachi		
Phone	(021) 34312885-7	Fax	(021) 34312887
E-mail	tradepolymerz@gmail.com		
Website	www.tradepolymerz.com		

Machinery Supplier - 2

Company Name	K-Group of Companies		
Contact Person	Mr. Shaikh Muhammad		
Address	245/2/F, PECHS, Block-6, Karachi-Pakistan		
Phone	(021) 34398500	Fax	(021) 34549986
E-mail	k@kgroup.com.pk		
Website	http://www.kgroup.com.pk		

10.2 Raw Material Suppliers

Raw Material Supplier – 1

Company Name	Masoom Corporation		
Contact Person	Mr. Hani Raza		
Address	SA-14, 2 nd floor, Techno City Mall, Karachi		
Phone	(021) 32270601-3	Fax	(021) 32270604

Raw Material Supplier – 2

Company Name	Bin Rasheed		
Contact Person	Mr. Javed		
Address	10-Abbot Road, Lahore-54000-Pakistan		
Phone	(042) 36296901-5	Fax	(042) 36368877
E-mail	service@binrasheed.com		
Website	www.binrasheed.com		

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
Pakistan Horticulture Development and Export Company (PHDEC)	www.phdec.org.pk
Punjab Vocational Training Council (PVTC)	www.pvtc.gop.pk
Technical Education and Vocational Training Authority (TEVTA)	www.tevta.org
Pakistan Readymade Garment Technical Training Institute	www.prgmea.org/prgtti/
Livestock & Dairy Development Department, Government of Punjab.	www.livestockpunjab.gov.pk
Punjab Industrial Estates (PIE)	www.pie.com.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.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	605,557,555	697,995,657	784,495,500	872,359,831	959,848,405	1,055,833,246	1,161,416,571	1,277,558,228	1,405,314,050	1,545,845,455
<i>Cost of sales</i>										
Cost of goods sold 1	466,258,291	513,003,674	550,370,091	584,193,394	613,564,528	644,242,755	676,454,893	710,277,637	745,791,519	783,081,095
Cost of goods sold 2	-	-	-	-	-	-	-	-	-	-
Operation costs 1 (direct labor)	15,397,200	17,320,113	38,013,288	41,725,532	45,800,041	50,259,198	55,152,505	60,522,231	66,414,760	72,880,995
Operating costs 2 (machinery maintenance)	4,685,520	4,919,796	5,165,786	5,424,075	5,695,279	5,980,043	6,279,045	6,592,997	6,922,647	7,268,779
Operating costs 3 (direct electricity)	39,841,200	43,825,320	48,207,852	53,028,637	58,331,501	64,164,651	70,581,116	77,639,228	85,403,150	93,943,466
Operating costs 4 (direct water)	1,682,104	1,938,877	2,179,154	2,423,222	2,666,246	2,932,870	3,226,157	3,548,773	3,903,650	4,294,015
Operating costs 5 (direct genset)	15,275,520	16,803,072	18,483,379	20,331,717	22,364,889	24,601,378	27,061,515	29,767,667	32,744,434	36,018,877
Total cost of sales	543,139,836	597,810,852	662,419,550	707,126,578	748,422,484	792,180,895	838,755,231	888,348,533	941,180,161	997,487,228
Gross Profit	62,417,720	100,184,805	122,075,949	165,233,253	211,425,921	263,652,351	322,661,339	389,209,695	464,133,889	548,358,228
	10%	14%	16%	19%	22%	25%	28%	30%	33%	35%
<i>General administration & selling expenses</i>										
Administration expense	3,360,000	3,687,134	8,092,238	8,880,110	9,744,690	10,693,446	11,734,575	12,877,070	14,130,800	15,506,595
Administration benefits expense	268,800	294,971	647,379	710,409	779,575	855,476	938,766	1,030,166	1,130,464	1,240,528
Land lease rental expense	-	-	-	-	-	-	-	-	-	-
Building rental expense	5,040,000	5,544,000	6,098,400	6,708,240	7,379,064	8,116,970	8,928,667	9,821,534	10,803,688	11,884,056
Electricity expense	177,740	195,514	215,065	236,572	260,229	286,252	314,877	346,364	381,001	419,101
Water expense	-	-	-	-	-	-	-	-	-	-
Gas expense	-	-	-	-	-	-	-	-	-	-
Travelling expense	100,800	110,614	242,767	266,403	292,341	320,803	352,037	386,312	423,924	465,198
Communications expense (phone, fax, mail, internet, etc.)	67,200	73,743	161,845	177,602	194,894	213,869	234,692	257,541	282,616	310,132
Office vehicles running expense	-	-	-	-	-	-	-	-	-	-
Office expenses (stationary, entertainment, janitorial services, etc.)	67,200	73,743	161,845	177,602	194,894	213,869	234,692	257,541	282,616	310,132
Promotional expense	1,816,673	2,093,987	2,353,486	2,617,079	2,879,545	3,167,500	3,484,250	3,832,675	4,215,942	4,637,536
Insurance expense	7,809,200	7,028,280	6,247,360	5,466,440	4,685,520	3,904,600	3,123,680	2,342,760	1,561,840	780,920
Professional fees (legal, audit, consultants, etc.)	3,027,788	3,489,978	3,922,477	4,361,799	4,799,242	5,279,166	5,807,083	6,387,791	7,026,570	7,729,227
Depreciation expense	15,721,850	15,721,850	15,721,850	15,721,850	15,721,850	15,721,850	15,721,850	15,721,850	15,721,850	15,721,850
Amortization of pre-operating costs	1,199,200	1,199,200	1,199,200	1,199,200	1,199,200	-	-	-	-	-
Amortization of legal, licensing, and training costs	-	-	-	-	-	-	-	-	-	-
Property tax expense	-	-	-	-	-	-	-	-	-	-
Bad debt expense	12,111,151	13,959,913	15,689,910	17,447,197	19,196,968	21,116,665	23,228,331	25,551,165	28,106,281	30,916,909
Miscellaneous expense 1	2,000,000	2,200,000	2,420,000	2,662,000	2,928,200	3,221,020	3,543,122	3,897,434	4,287,178	4,715,895
Subtotal	52,767,601	55,672,927	63,173,823	66,632,503	70,256,211	73,111,486	77,646,622	82,710,204	88,354,770	94,638,079
Operating Income	9,650,118	44,511,879	58,902,127	98,600,750	141,169,710	190,540,865	245,014,717	306,499,491	375,779,120	453,720,148
Other income (interest on cash)	4,203,568	10,443,762	14,810,437	18,890,492	24,191,779	30,425,772	37,600,047	45,971,669	55,607,471	79,690,977
Other income 2	-	-	-	-	-	-	-	-	-	-
Gain / (loss) on sale of machinery & equipment	-	-	-	-	-	-	-	-	-	-
Gain / (loss) on sale of office equipment	-	-	-	-	-	-	-	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	-	-	-	-	-	-
Earnings Before Interest & Taxes	13,853,686	54,955,641	73,712,564	117,491,242	165,361,489	220,966,637	282,614,764	352,471,160	431,386,591	533,411,125
Interest on short term debt	-	-	-	-	-	-	-	-	-	-
Interest on export refinancing	-	-	-	-	-	-	-	-	-	-
Interest expense on machinery & equipment lease	-	-	-	-	-	-	-	-	-	-
Interest expense on office equipment lease	-	-	-	-	-	-	-	-	-	-
Interest expense on office vehicles lease	-	-	-	-	-	-	-	-	-	-
Interest expense on long term debt (Project Loan)	-	-	-	-	-	-	-	-	-	-
Interest expense on long term debt (Working Capital Loan)	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-
Earnings Before Tax	13,853,686	54,955,641	73,712,564	117,491,242	165,361,489	220,966,637	282,614,764	352,471,160	431,386,591	533,411,125
Tax	4,017,569	15,937,136	21,376,643	34,072,460	47,954,832	64,080,325	81,958,282	102,216,636	125,102,111	154,689,226
NET PROFIT/(LOSS) AFTER TAX	9,836,117	39,018,505	52,335,920	83,418,782	117,406,657	156,886,312	200,656,482	250,254,524	306,284,479	378,721,899

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	6,120,000	77,951,362	130,923,888	165,284,847	212,524,998	271,310,590	337,204,856	414,796,076	504,637,307	607,512,113	986,307,431
Accounts receivable	-	74,657,781	80,356,020	91,386,441	102,134,918	112,944,343	124,254,348	136,679,783	150,347,762	165,382,538	181,920,791
Finished goods inventory	-	13,926,662	14,953,398	16,569,302	17,682,818	18,710,562	19,804,522	20,968,881	22,208,713	23,529,504	24,937,181
Equipment spare part inventory	780,920	860,964	949,213	1,046,507	1,153,775	1,272,036	1,402,420	1,546,168	1,704,650	1,879,377	-
Raw material inventory	116,564,573	134,663,464	151,695,756	169,069,220	186,447,880	205,558,787	226,628,563	249,857,991	275,468,435	303,703,950	-
Pre-paid annual land lease	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	420,000	462,000	508,200	559,020	614,922	676,414	744,056	818,461	900,307	990,338	-
Pre-paid machinery & equipment lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid office equipment lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid office vehicles lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid insurance	7,809,700	7,028,280	6,247,360	5,466,440	4,685,520	3,904,600	3,123,680	2,342,760	1,561,840	780,920	-
Total Current Assets	131,694,693	309,550,514	385,633,835	449,381,777	525,244,827	614,377,333	713,162,445	827,010,120	956,829,014	1,103,778,739	1,193,165,403
<i>Fixed assets</i>											
Land	-	-	-	-	-	-	-	-	-	-	-
Building/Infrastructure	-	-	-	-	-	-	-	-	-	-	-
Machinery & equipment	156,184,000	140,565,600	124,947,200	109,328,800	93,710,400	78,092,000	62,473,600	46,855,200	31,236,800	15,618,400	-
Furniture & fixtures	623,500	561,150	498,800	436,450	374,100	311,750	249,400	187,050	124,700	62,350	-
Office vehicles	-	-	-	-	-	-	-	-	-	-	-
Office equipment	411,000	369,900	328,800	287,700	246,600	205,500	164,400	123,300	82,200	41,100	-
Total Fixed Assets	157,218,500	141,496,650	125,774,800	110,052,950	94,331,100	78,609,250	62,887,400	47,165,550	31,443,300	15,721,850	-
<i>Intangible assets</i>											
Pre-operation costs	5,996,000	4,796,800	3,597,600	2,398,400	1,199,200	-	-	-	-	-	-
Legal, licensing, & training costs	-	-	-	-	-	-	-	-	-	-	-
Total Intangible Assets	5,996,000	4,796,800	3,597,600	2,398,400	1,199,200	-	-	-	-	-	-
TOTAL ASSETS	294,909,193	455,843,964	515,006,235	561,833,127	620,775,127	692,986,583	776,049,845	874,175,670	988,272,714	1,119,500,589	1,193,165,403
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable	-	149,540,114	165,345,643	178,927,793	191,643,072	203,693,580	216,555,727	230,335,421	245,106,671	260,950,067	194,880,791
Export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Short term debt	-	-	-	-	-	-	-	-	-	-	-
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	-	149,540,114	165,345,643	178,927,793	191,643,072	203,693,580	216,555,727	230,335,421	245,106,671	260,950,067	194,880,791
<i>Other liabilities</i>											
Machinery & equipment lease payable	-	-	-	-	-	-	-	-	-	-	-
Office equipment lease payable	-	-	-	-	-	-	-	-	-	-	-
Office vehicle lease payable	-	-	-	-	-	-	-	-	-	-	-
Deferred tax	-	4,017,569	19,954,705	22,646,680	22,646,680	22,646,680	18,117,344	13,588,008	9,058,672	4,529,336	-
Long term debt (Project Loan)	-	-	-	-	-	-	-	-	-	-	-
Long term debt (Working Capital Loan)	-	-	-	-	-	-	-	-	-	-	-
Total Long Term Liabilities	-	4,017,569	19,954,705	22,646,680	22,646,680	22,646,680	18,117,344	13,588,008	9,058,672	4,529,336	-
<i>Shareholders' equity</i>											
Paid-up capital	294,909,193	294,909,193	294,909,193	294,909,193	294,909,193	294,909,193	294,909,193	294,909,193	294,909,193	294,909,193	294,909,193
Retained earnings	-	7,377,088	34,796,695	65,349,461	111,576,183	171,737,130	246,467,582	335,343,048	439,198,179	559,111,994	703,375,420
Total Equity	294,909,193	302,286,281	329,705,888	360,258,654	406,485,375	466,646,323	541,376,775	630,252,241	734,107,372	854,021,186	998,284,612
TOTAL CAPITAL AND LIABILITIES	294,909,193	455,843,964	515,006,235	561,833,127	620,775,127	692,986,583	776,049,845	874,175,670	988,272,714	1,119,500,589	1,193,165,403

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
Operating activities											
Net profit		9,836,117	39,018,505	52,335,920	83,418,782	117,406,657	156,886,312	200,656,482	250,254,524	306,284,479	378,721,899
Add: depreciation expense		15,721,850	15,721,850	15,721,850	15,721,850	15,721,850	15,721,850	15,721,850	15,721,850	15,721,850	15,721,850
amortization of pre-operating costs		1,199,200	1,199,200	1,199,200	1,199,200	1,199,200	-	-	-	-	-
amortization of training costs		-	-	-	-	-	-	-	-	-	-
Deferred income tax		4,017,569	15,937,136	2,691,975	-	-	(4,529,336)	(4,529,336)	(4,529,336)	(4,529,336)	(4,529,336)
Accounts receivable		(74,657,781)	(5,698,239)	(11,030,421)	(10,748,476)	(10,809,426)	(11,310,005)	(12,425,435)	(13,667,978)	(15,034,776)	(16,538,254)
Finished goods inventory		(13,926,662)	(1,026,736)	(1,615,904)	(1,113,516)	(1,027,744)	(1,093,960)	(1,164,358)	(1,239,833)	(1,320,791)	(1,407,677)
Equipment inventory	(780,920)	(80,044)	(88,249)	(97,294)	(107,267)	(118,262)	(130,384)	(143,748)	(158,482)	(174,727)	1,879,377
Raw material inventory	(116,564,573)	(18,098,892)	(17,032,292)	(17,373,463)	(17,378,660)	(19,110,908)	(21,069,776)	(23,229,428)	(25,610,444)	(28,235,515)	303,703,950
Pre-paid building rent	(420,000)	(42,000)	(46,200)	(50,820)	(55,902)	(61,492)	(67,641)	(74,406)	(81,846)	(90,031)	990,338
Pre-paid machinery & equipment lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid office equipment lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid office vehicles lease interest	-	-	-	-	-	-	-	-	-	-	-
Advance insurance premium	(7,809,200)	780,920	780,920	780,920	780,920	780,920	780,920	780,920	780,920	780,920	780,920
Accounts payable		149,540,114	15,805,529	13,582,150	12,715,279	12,050,509	12,862,147	13,779,694	14,771,250	15,843,396	(66,069,276)
Other liabilities		-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(125,574,693)	74,290,391	64,571,424	56,144,113	84,432,209	116,031,304	148,050,127	189,372,236	236,240,624	289,245,471	613,253,792
Financing activities											
Project Loan - principal repayment		-	-	-	-	-	-	-	-	-	-
Working Capital Loan - principal repayment		-	-	-	-	-	-	-	-	-	-
Add: land lease expense		-	-	-	-	-	-	-	-	-	-
Land lease payment	-	-	-	-	-	-	-	-	-	-	-
Machinery & equipment lease principal repayment	-	-	-	-	-	-	-	-	-	-	-
Office equipment lease principal repayment	-	-	-	-	-	-	-	-	-	-	-
Office vehicles lease principal repayment	-	-	-	-	-	-	-	-	-	-	-
Short term debt principal repayment	-	-	-	-	-	-	-	-	-	-	-
Export re-finance principal repayment	-	-	-	-	-	-	-	-	-	-	-
Additions to export refinancing	-	-	-	-	-	-	-	-	-	-	-
Additions to lease financing	-	-	-	-	-	-	-	-	-	-	-
Additions to Project Loan	-	-	-	-	-	-	-	-	-	-	-
Additions to Working Capital Loan	-	-	-	-	-	-	-	-	-	-	-
Issuance of shares	294,909,193	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares											
Cash provided by / (used for) financing activities	294,909,193	-	-	-	-	-	-	-	-	-	-
Investing activities											
Capital expenditure	(163,214,500)	-	-	-	-	-	-	-	-	-	-
Acquisitions											
Cash (used for) / provided by investing activities	(163,214,500)	-	-	-	-	-	-	-	-	-	-
NET CASH	6,120,000	74,290,391	64,571,424	56,144,113	84,432,209	116,031,304	148,050,127	189,372,236	236,240,624	289,245,471	613,253,792

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Number of shifts	02 shifts
Shift time span	12 hours
Operational days per year	312 days

13.2 Production Cost Assumptions

Description	Details
Production Capacity (No. of 100 gm bags)	19,169,280
Production capacity utilization %	90%
Capacity utilization growth rate	2%

13.3 Revenue Assumptions

Description	Details
Sales price per unit	Rs. 36
Total Revenue (first year)	Rs. 605,557,555

13.4 Financial Assumptions

Description	Details
Project Life	10 Years
Equity	100%

Small and Medium Enterprises Development Authority

HEAD OFFICE

4th Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road, Lahore
Tel: (92 42) 111 111 456, Fax: (92 42) 36304926-7

www.smeda.org.pk, helpdesk@smeda.org.pk

REGIONAL OFFICE PUNJAB	REGIONAL OFFICE SINDH	REGIONAL OFFICE KPK	REGIONAL OFFICE BALOCHISTAN
3 rd Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road Lahore, Tel: (042) 111-111-456 Fax: (042) 36304926-7 helpdesk.punjab@smeda.org.pk	5 TH Floor, Bahria Complex II, M.T. Khan Road, Karachi. Tel: (021) 111-111-456 Fax: (021) 5610572 helpdesk-khi@smeda.org.pk	Ground Floor State Life Building The Mall, Peshawar. Tel: (091) 9213046-47 Fax: (091) 286908 helpdesk-pew@smeda.org.pk	Bungalow No. 15-A Chaman Housing Scheme Airport Road, Quetta. Tel: (081) 831623, 831702 Fax: (081) 831922 helpdesk-qta@smeda.org.pk