



## Pre-feasibility Study

# MELAMINE TABLEWARE MANUFACTURING UNIT

May 2021

“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

## TABLE OF CONTENTS

<b>1</b>	<b>DISCLAIMER</b> .....	<b>2</b>
<b>2</b>	<b>EXECUTIVE SUMMARY</b> .....	<b>3</b>
<b>3</b>	<b>INTRODUCTION TO SMEDA</b> .....	<b>3</b>
<b>4</b>	<b>PURPOSE OF THE DOCUMENT</b> .....	<b>4</b>
<b>5</b>	<b>BRIEF DESCRIPTION OF PROJECT AND PRODUCT</b> .....	<b>4</b>
5.1	Production Process Flow .....	5
5.2	Installed and Operational Capacities .....	6
<b>6</b>	<b>CRITICAL SUCCESS FACTORS</b> .....	<b>7</b>
<b>7</b>	<b>GEOGRAPHICAL POTENTIAL FOR INVESTMENT</b> .....	<b>7</b>
<b>8</b>	<b>POTENTIAL TARGET CUSTOMERS / MARKETS</b> .....	<b>7</b>
<b>9</b>	<b>PROJECT COST SUMMARY</b> .....	<b>7</b>
9.1	Project Economics .....	8
9.2	Project Cost .....	9
9.3	Space Requirement .....	10
9.4	Machinery and Equipment Requirement .....	10
9.5	Furniture and Fixtures Requirement .....	11
9.6	Office Equipment Requirement .....	11
9.7	Vehicle Requirement .....	12
9.8	Raw Material Requirement .....	12
9.9	Human Resource Requirement .....	13
9.10	Utilities and Other Costs .....	13
9.11	Revenue Generation .....	13
<b>10</b>	<b>CONTACT DETAILS</b> .....	<b>14</b>
<b>11</b>	<b>USEFUL WEB LINKS</b> .....	<b>15</b>
<b>12</b>	<b>ANNEXURES</b> .....	<b>17</b>
12.1	Income Statement .....	17
12.2	Balance Sheet .....	18
12.3	Cash Flow Statement .....	19
<b>13</b>	<b>KEY ASSUMPTIONS</b> .....	<b>20</b>
13.1	Operating Cost Assumptions .....	20
13.2	Production Cost Assumptions .....	20
13.3	Revenue Assumptions .....	21

## 1 DISCLAIMER

The objective of 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 of the concerned factors. The future is uncertain, 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 to be obtained by the user. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information 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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### ***Document Control***

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## 2 EXECUTIVE SUMMARY

This pre-feasibility study is for setting up a Melamine tableware manufacturing facility exclusively for the dinner set. The tableware made from melamine chemical compound gives traditional ceramic tableware appearance and is more durable than standard plastic. The prime focus of the proposed business venture would be to manufacture 80-piece melamine dinner sets, including bowl, plates, spoons, dishes etc., at affordable prices and to be sold to the wholesalers or retail outlets.

The proposed Melamine Tableware Manufacturing Unit should preferably be located at Gujranwala, Lahore, Karachi, Rawalpindi and Lalamusa as required raw material and labour is easily accessible in these cities.

The proposed unit can produce 80 melamine tableware sets per day and 24,000 sets per year based on 300 working days with 8 hours single shift. However, starting operational capacity is assumed at 60% (i.e. 14,400 sets) with an annual increase of 5%, it will attain a maximum capacity of 95% in 8<sup>th</sup> year. This production capacity is estimated to be economically viable and justifies the capital as well as operational cost of the project. However, entrepreneur's knowledge of industry, competitive pricing and strong linkage with suppliers and wholesalers network are key factors for the success of this business.

Total project cost is estimated as Rs. 16.47 million out of which Rs.13.26 million is the capital cost and Rs. 3.21 million is for working capital. The project is to be financed through 100% equity. The project NPV is around Rs.18.10 million, with an IRR of 35% and a Payback Period of 3.48 years. The project will provide employment opportunities to 24 individuals, including the owner. The legal business status of this project is proposed as '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 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 prefeasibility studies in key investment areas have 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 the

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, production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in the **Melamine Tableware Manufacturing Unit** business 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 the basis of an informed Investment Decision.

## **5 BRIEF DESCRIPTION OF PROJECT AND PRODUCT**

Melamine tableware is made up of melamine powder and is moulded by high temperature and high pressure. The product has good chemical stability, is non-toxic, tasteless and safe to use. Melamine is getting popular because this unique material is lighter and more durable. It is created by combining melamine resin with strengthening materials, which means it can stand up to the rigors of everyday use. Melamine tableware can also be made in a wide range of colors and styles.

The proposed business will have the capacity to produce 80 Melamine sets per day on a single shift basis. The proposed unit will manufacture an 80-piece melamine dinner set having 10 kgs weight and packed in a corrugated box. The composition of 80 pieces would be as follows: 8 Rice Plates, 8 Deep Plates, 8 Bread Plates, 8 Butter Plates, 8 Dessert Bowls, 8 Sauce Bowls, 8 Soup Spoons, 3 Serving Spoons, 2 Rice dishes, 2 Dish Lids, 2 Serving Bowls, 2 Bowl Lids, 2 Salad Bowls, 3 Rice serving Spoons, 8 Dinner Spoons.

For this purposes Hydraulic Presses of 20", 22", 24", 26", 28" along with grinding and buffing machines will be installed. The produced dinnersets will be directly sold to wholesalers and retailers. The unit will also operate on order manufacturing basis.

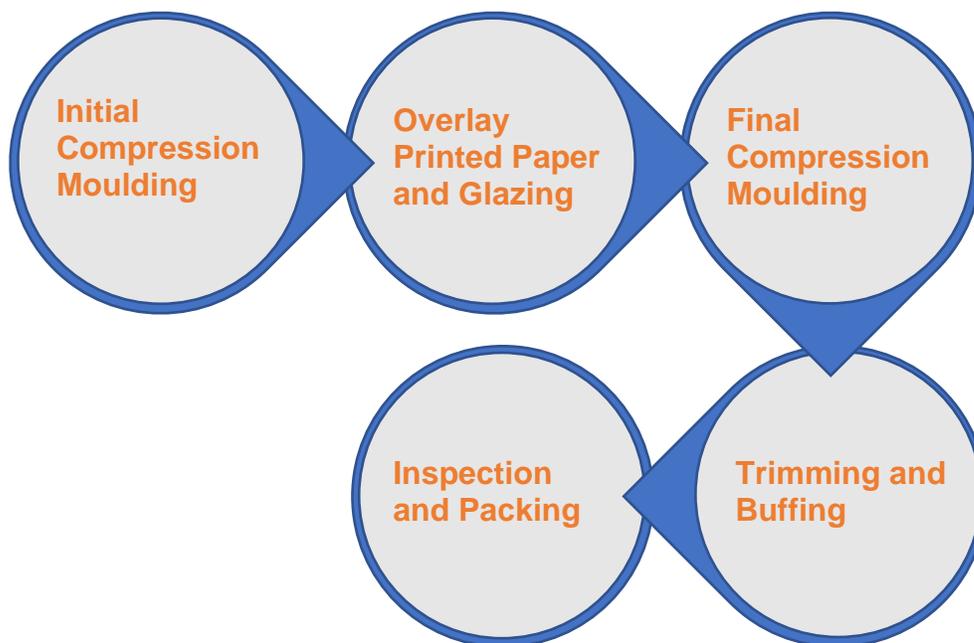
The melamine Tableware business offers a good return on investment with a short payback period. It can easily attain a sustainable level due to the growing demand. Financial analysis shows the unit shall be profitable from the very first year of operation. The unit would preferably be located in any major industrial city with easy accessibility of raw material, labor and necessary infrastructure.

### 5.1 Production Process Flow

For melamine table manufacturing, the major raw material is melamine moulding compound. It comes in white color and exists in fine powder form, which is odourless and tasteless and is non-toxic. It should be kept in clean and dry place.

The production process flow of the melamine tableware manufacturing unit is as follows:

**Figure 1: Production Process Flow**



**Initial Compression Moulding:** Compression moulding is an old and widely used moulding process for melamine tableware manufacturing. A precise amount of melamine moulding compound is manually loaded into the bottom half of a heated mould in this process. Then the mould halves are brought together to compress the charge, forcing it to flow and conform to the shape of the cavity; after heating, the mould halves are opened manually by the operator and the piece is removed from the pit. The piece is 70-80% cured (complete curing shall be avoided). At this stage, the surface of the article shows no sign of brightness and is soft.

**Overlay Printed Paper and Glazing:** After the first compression moulding, the decorated paper is placed on plain pieces. Then, the surface of the piece is evenly sprinkled with the glazing powder. The powder should not scatter; otherwise, it will

affect the product colour. Printed paper is used for decorative design and enhances the appearance of the dinner set, and glazing powder is used for brightness.

**Final Compression Moulding:** After overlay paper and glazing powder, the machine operator presses the mould for final compression. Particular attention shall be paid at this stage. After the last compression, dinner set pieces need trimming and buffing.

**Trimming and Buffing:** The trimming process is the shearing of excess material from the dinner set pieces to obtain the final design. Trimming and buffing are essential to remove the products burr, making the product look more beautiful and smoother. A suitable exhaust system should be provided in the area where grinding is handled for dust removal.

**Inspection and Packing:** Strick quality control measures will be in place to pick out the unqualified products. Some typical faults are wrong attachment and breakage of overlay paper, and improper cure. Each set of final dinner set is packed into a corrugated box.

## 5.2 Installed and Operational Capacities

The proposed Melamine Tableware Manufacturing Unit will have the capacity to produce 80 melamine dinner sets per day and 24,000 sets per year. However, the initial operating capacity of the project will be 60% with an annual increase of 5% in subsequent years upto maximum capacity utilization of 95% in year 8. The unit will operate for 8 hours per day on a single shift basis with 300 working days.

All the manufactured sets would not meet the quality standards and therefore will be categorized as “A Grade” and “B Grade”. Accordingly to the production practices, it is estimated that 80% of the produced dinner sets will be ‘A Grade’, while 20% will be ‘B Grade’.

**Table 1: Installed and Operational Capacity**

Description	Total Capacity	Operational Capacity 60% (Year 1)	Maximum Operational Capacity 95% (Year 8)
Dinner Sets – A Grade	19,200	11,520	18,240
Dinner Sets – B Grade	4,800	2,880	4,560
<b>Total Dinner Sets</b>	<b>24,000</b>	<b>14,400</b>	<b>22,800</b>

## 6 CRITICAL SUCCESS FACTORS

Following are critical success factors associated with this business:

- Selection of energy efficient Machinery & Equipment.
- Prior knowledge and information about the melamine tableware industry.
- Selection of appropriate location with availability of required infrastructural support and easy access to markets.
- Strong linkages with raw material suppliers for sourcing quality material on time at economical prices.
- Induction of trained human resource for the handling of business operations especially in production and sales.
- Stringent supervision of the production process at every level.
- Strong linkages with wholesaler / retailers for selling of product.

## 7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Location selection is critical to the success of the project. It is essential to find a location in an industrial cluster where utilities and other infrastructure are conveniently available. Presently, Karachi, Lahore, Rawalpindi, Gujranwala, and Lalamusa can be considered as most manufacturers are located in these cities; being close to large buyers may lead to consistent orders and referrals. Additionally, these cities have adequate availability of skilled labour, raw material sources and infrastructure.

## 8 POTENTIAL TARGET CUSTOMERS / MARKETS

Overall local production of uniquely designed high-end melamine dinnerware is currently in good demand. Potential target customers are middle and lower-income groups. At present, melamine dinnerware is favoured for casual dining at home and outdoor eating parties. It is also used in catering, fast food chains, hotels and institutions' canteens.

## 9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of the Melamine Tableware 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. 57.39 million in year one.

To financially appraise the project, a 100% Equity-Based Business Model has been assumed. The following table shows the Internal Rate of Return, Payback Period and Net Present Value of the proposed venture.

**Table 2: Project Economics (Equity Financed)**

Description	Details
Internal Rate of Return (IRR)	35%
Payback Period (Yrs.)	3.48
Net Present Value (Rs.)	18,096,928

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	42,423,000	42,643,559	45,316,985	47,832,528	50,767,430	54,251,130	58,118,357	62,546,636	68,610,537	75,627,560
Break-Even Units	10,423	9,931	10,099	10,152	10,262	10,444	10,656	10,922	11,410	11,978
Margin of Safety	26%	36%	40%	44%	46%	49%	51%	52%	50%	47%

However, for further explanation, the Project Economics based on Debt:Equity (i.e. 50:50) Model has also been computed. Based on the 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 4: Project Economics Based on Debt (50%):Equity (50%)**

Description	Details
Internal Rate of Return (IRR)	33%
Payback Period (Yrs.)	3.68
Net Present Value (Rs.)	21,833,655

The financial assumptions for Debt: Equity is as follows:

**Table 4.1: Financial Assumptions for Debt: Equity Model**

Description	Details
Debt	50%

Equity	50%
Interest Rate on Debt	12%
Debt Tenure (Years)	5
Debt Payment / Year	1

The projected Income Statement, Balance Sheet and Cash Flow Statement attached as annexures are based on a 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 5: Project Cost**

Description	Amount Rs.
<b>Capital Cost</b>	
Machinery and Equipment	9,577,800
Office Vehicles	1,255,982
Pre-Operating Cost	1,310,000
Office Equipment	547,500
Furniture and Fixture	328,750
Security Deposit for Rental Building	240,000
<b>Total Capital Cost</b>	<b>13,260,032</b>
<b>Working Capital</b>	
Raw Material Inventory	1,302,488
Cash	1,255,636
Up-Front Insurance Payment	398,022
Up-Front Building Rental	240,000
Equipment Spare Parts Inventory	10,281
<b>Total Working Capital</b>	<b>3,206,427</b>
<b>Total Project Cost</b>	<b>16,466,459</b>

### 9.3 Space Requirement

In order to reduce the initial capital expenditure, the proposed melamine tableware manufacturing unit will be established in rental premises. Therefore, space may be acquired in the industrial state or outskirts of identified cities where skilled workers are available. The rent of the building will depend on the area and geographical location of the unit. The project will require an estimated land of 1 Kanal (i.e. 4,500 sq. ft.).

The space requirement for the proposed melamine tableware manufacturing unit is estimated considering various facilities, including management office, production hall, storage, open space, etc. However, the unit's operating in the industry do not follow any set pattern.

**Table 6: Space Requirements**

Description	Area (Sq.Ft.)
Production Hall	2,100
Warehouse and Store	1,550
Open Area	600
Management Building	250
<b>Total</b>	<b>4,500</b>

For this particular pre-feasibility, the rent amount has been determined at Rs. 80,000 per month, with a security deposit of Rs. 240,000.

### 9.4 Machinery and Equipment Requirement

Machinery and equipment for the proposed project are stated below.

**Table 7: Machinery and Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Hydraulic Press 20" (5.64 KVA)	2	275,000	550,000
Hydraulic Press 22" (7.5 KVA)	2	350,000	700,000
Hydraulic Press 24" (9.32 KVA)	2	450,000	900,000
Hydraulic Press 26" (14.92 KVA)	2	550,000	1,100,000
Hydraulic Press 28" (18 KVA)	2	815,000	1,630,000
Grinding & Buffing Machine (2.8 KVA)	2	20,000	40,000
Compressor (2 HP motor) (1.86 KVA)	4	28,000	112,000

Dies (Set)	2	400,000	800,000
Machinery Installation Charges	1	100,000	100,000
Industrial Exhaust Fans	2	38,650	77,300
Generator Perkins UK Diesel 120KW	1	3,568,500	3,568,500
<b>Total</b>			<b>9,577,800</b>

## 9.5 Furniture and Fixtures Requirement

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

**Table 8: Furniture and Fixture**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Sofa Set	5	25,000	125,000
Chairs	11	7,273	80,000
Table	3	21,500	64,500
Carpeting	25	1,250	31,250
File Cabinet	2	14,000	28,000
<b>Total</b>			<b>328,750</b>

## 9.6 Office Equipment Requirement

Following office equipment will be required for Melamine Tableware Manufacturing Unit.

**Table 9: Office Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Electric Wiring and Lighting	1	100,000	100,000
Air-conditioners (1.5 Ton Split)	1	83,000	83,000
Laptops	1	65,000	65,000
Fridge	1	51,500	51,500
Fire Extinguishers	5	9,000	45,000
LED	1	32,500	32,500
UPS	1	30,000	30,000
Computer for Staff	1	25,000	25,000

Fans	4	4,500	18,000
Computer Printer	1	16,000	16,000
Dispenser	3	16,000	48,000
Tube Lights	14	800	11,200
Microwave Oven	1	7,500	7,500
Exhaust Fans	2	3,000	6,000
Telephones	4	1,200	4,800
Calculator	2	2,000	4,000
<b>Total</b>			<b>547,500</b>

### 9.7 Vehicle Requirement

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

**Table 10: Office Vehicles**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Delievery Van	1	1,141,500	1,141,500
Motor Bike	1	77,900	77,900
Registration Fee			36,582
<b>Total</b>			<b>1,255,982</b>

### 9.8 Raw Material Requirement

The primary raw material required for melamine tableware is moulding powder and glazing powder. The raw material requirement during the first year of production is provided below.

**Table 11: Raw Material Cost (Year 1)**

Description	Cost Per Bag. Rs.	Cost Per Kg Rs.	Quantity Req. per Dinner Set Kg.	Cost Per Dinner Set Rs.
Melamine Moulding Powder (25 Kg Bag)	4,300	172	11	1,892
Glazing Powder (25 Kg)	8,500	340	0.5	170
Delivery Charges				25

<b>Total</b>				<b>2,087</b>
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## 9.9 Human Resource Requirement

In order to run the operations of Melamine Tableware Manufacturing Unit smoothly, details of human resources required along with several employees and monthly salary are recommended as under:

**Table 12: Human Resource**

Description	No. of Employees	Monthly Salary Per Person (Rs.)
CEO	1	100,000
Accountant / Store Keeper	1	35,000
Machine Operator	10	25,000
Buffing Man	1	20,000
Grinding Man	1	20,000
Packing Man	4	18,000
Helper	1	18,000
Driver	1	22,000
Security Guard	2	20,000
Office Boy	2	20,000
	<b>24</b>	

In addition to the above staff, Pressmen will be engaged on per piece contract basis.

## 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 approximately Rs. 298,979 per month. Furthermore, promotional expense essential for marketing the melamine tableware manufacturing unit is calculated as 1.0% of revenue.

## 9.11 Revenue Generation

Based on the capacity utilization of 60% for the melamine dinner set, sales revenue during the first year of operations is estimated as under:

**Table 13: Revenue Generation (Year 1)**

Description	No. Of Units Produced	Finished Goods Inventory	Units Available For Sale	Sale Price/ Unit (Rs.)	Sales Revenue (Rs.)
Melamine Dinner Set (A-Pairs)	11,520	240	11,280	4,600	51,888,000
Melamine Dinner Set (B-Pairs)	2,880	60	2,820	1,950	5,499,000
<b>Total</b>					<b>57,387,000</b>

## 10 CONTACT DETAILS

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

Name Of Supplier	Type Of Supplies	Address
Mr. Haji Muhammad Iqbal	Complete Machinery	Sialkot Road, Near Masjid Bilal Gujranwala 0300-8641595
Mr. Nazir Hussain	Complete Machinery	Jinnah Road, Near Al Arain Hospital, Gujranwala 0300-7447245
Shoppingum	Generator	0332-5583783 <a href="http://www.shoppingum.com/price/diesel-generator/">www.shoppingum.com/price/diesel-generator/</a>
Woodpecker	Office Furniture	0331-8999222, 0331-7151566 <a href="http://www.apnafurniture.pk">www.apnafurniture.pk</a>

## 11 USEFUL WEB LINKS

Small and Medium Enterprises Development Authority (SMEDA)	<a href="http://www.smeda.org.pk">www.smeda.org.pk</a>
Government of Pakistan	<a href="http://www.pakistan.gov.pk">www.pakistan.gov.pk</a>
Ministry of Education, Training and Standards in Higher Education	<a href="http://moptt.gov.pk">http://moptt.gov.pk</a>
Government of Punjab	<a href="http://www.punjab.gov.pk">www.punjab.gov.pk</a>
Government of Sindh	<a href="http://www.sindh.gov.pk">www.sindh.gov.pk</a>
Government of Khyber Pakhtunkhwa	<a href="http://www.khyberpakhtunkhwa.gov.pk">www.khyberpakhtunkhwa.gov.pk</a>
Government of Balochistan	<a href="http://www.balochistan.gov.pk">www.balochistan.gov.pk</a>
Government of Gilgit Baltistan	<a href="http://www.gilgitbaltistan.gov.pk">www.gilgitbaltistan.gov.pk</a>
Government of Azad Jamu Kashmir	<a href="http://www.ajk.gov.pk">www.ajk.gov.pk</a>
Trade Development Authority of Pakistan (TDAP)	<a href="http://www.tdap.gov.pk">www.tdap.gov.pk</a>
Security and Exchange Commission of Pakistan (SECP)	<a href="http://www.secp.gov.pk">www.secp.gov.pk</a>
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	<a href="http://www.fpcci.com.pk">www.fpcci.com.pk</a>
State Bank of Pakistan (SBP)	<a href="http://www.sbp.org.pk">www.sbp.org.pk</a>
Punjab Vocational Training Council (PVTC)	<a href="http://www.pvtc.gov.pk">www.pvtc.gov.pk</a>
Technical Education and Vocational Training Authority (TEVTA)	<a href="http://www.tevta.org">www.tevta.org</a>
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	<a href="http://www.fiedmc.com.pk">www.fiedmc.com.pk</a>
Punjab Industrial Estate Development and Management Company (PIEDMC)	<a href="http://www.pie.com.pk">www.pie.com.pk</a>
Punjab Small Industries Corporation	<a href="http://www.psic.gov.pk">www.psic.gov.pk</a>
Sundar Industrial Estate	<a href="https://sie.com.pk">https://sie.com.pk</a>
Quaid-e-Azam Industrial Estate	<a href="https://www.qie.com.pk">https://www.qie.com.pk</a>
Sindh Small Industries Corporation	<a href="http://www.ssic.gos.pk">www.ssic.gos.pk</a>
Korangi Industrial Area	<a href="https://www.kati.pk">https://www.kati.pk</a>

Technology Upgradation and Skill Development Company (TUSDEC)	<a href="http://www.tusdec.org.pk">www.tusdec.org.pk</a>
Pakistan Plastic Manufacturers Association	<a href="http://www.pakplas.com.pk">www.pakplas.com.pk</a>
King Melamine	<a href="http://kingmelamine.com">kingmelamine.com</a>
Dove Melamine Ware	<a href="http://www.dovemelamine.com/dovemelamine/">www.dovemelamine.com/dovemelamine/</a>

## 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	57,387,000	66,878,661	75,272,361	84,689,819	94,860,843	105,837,244	117,674,133	130,430,118	137,101,955	143,957,053
<i>Cost of sales</i>										
Raw Material	29,426,700	34,130,276	38,597,891	43,426,942	48,642,403	54,270,842	60,340,520	66,881,488	70,302,649	73,817,781
Printed Papersheet	1,833,000	2,125,988	2,404,277	2,705,080	3,029,953	3,380,551	3,758,633	4,166,073	4,379,178	4,598,137
Pakaging	3,807,000	4,415,513	4,993,498	5,618,244	6,292,980	7,021,144	7,806,392	8,652,612	9,095,216	9,549,976
Operation costs 1 (direct labor)	4,465,000	5,007,962	5,509,389	6,060,930	6,667,603	7,334,926	8,068,968	8,876,406	9,774,765	10,752,241
Operating costs 2 (machinery maintenance)	493,500	572,381	647,305	728,291	815,757	910,148	1,011,940	1,121,635	1,179,009	1,237,960
Operating costs 3 (direct electricity)	3,308,742	3,578,921	4,153,286	4,831,574	5,601,906	6,476,256	7,468,071	8,592,445	9,385,821	10,258,534
<b>Total cost of sales</b>	<b>43,333,942</b>	<b>49,831,040</b>	<b>56,305,646</b>	<b>63,371,060</b>	<b>71,050,601</b>	<b>79,393,867</b>	<b>88,454,524</b>	<b>98,290,660</b>	<b>104,116,638</b>	<b>110,214,630</b>
<b>Gross Profit</b>	<b>14,053,058</b>	<b>17,047,621</b>	<b>18,966,714</b>	<b>21,318,759</b>	<b>23,810,241</b>	<b>26,443,377</b>	<b>29,219,609</b>	<b>32,139,459</b>	<b>32,985,318</b>	<b>33,742,423</b>
<i>General administration &amp; selling expenses</i>										
Administration expense	2,844,000	3,128,400	3,441,240	3,785,364	4,163,900	4,580,290	5,038,319	5,542,151	6,096,367	6,706,003
Administration benefits expense	426,600	469,260	516,186	567,805	624,585	687,044	755,748	831,323	914,455	1,005,900
Building rental expense	960,000	1,056,000	1,161,600	1,277,760	1,405,536	1,546,090	1,700,699	1,870,768	2,057,845	2,263,630
Electricity expense	279,006	306,907	337,597	371,357	408,493	449,342	494,276	543,704	598,074	657,882
Water expense	142,200	156,420	172,062	189,268	208,195	229,015	251,916	277,108	304,818	335,300
Gas expense	180,000	189,000	198,450	208,373	218,791	229,731	241,217	253,278	265,942	279,239
Travelling expense	426,600	469,260	516,186	567,805	624,585	687,044	755,748	831,323	914,455	1,005,900
Communications expense (phone, fax, mail, internet, etc.)	227,520	250,272	275,299	302,829	333,112	366,423	403,066	443,372	487,709	536,480
Office vehicles running expense	313,996	345,395	379,935	417,928	459,721	505,693	556,262	611,888	673,077	740,385
Office expenses (stationary, entertainment, janitorial services, etc)	426,600	469,260	516,186	567,805	624,585	687,044	755,748	831,323	914,455	1,005,900
Promotional expense	573,870	545,177	517,918	492,022	467,421	444,050	421,847	400,755	380,717	361,681
Insurance expense	398,022	351,940	305,858	259,776	213,694	268,750	215,000	161,250	107,500	53,750
Professional fees (legal, audit, consultants, etc.)	286,935	272,588	258,959	246,011	233,710	222,025	210,924	200,377	190,359	180,841
Depreciation expense	1,351,351	1,351,351	1,351,351	1,351,351	1,351,351	1,534,962	1,534,962	1,534,962	1,534,962	1,534,962
Amortization of pre-operating costs	262,000	262,000	262,000	262,000	262,000	-	-	-	-	-
Bad debt expense	1,147,740	1,090,353	1,035,835	984,044	934,841	888,099	843,694	801,510	761,434	723,362
Miscellaneous expense 1	142,200	156,420	172,062	189,268	208,195	229,015	251,916	277,108	304,818	335,300
<b>Subtotal</b>	<b>10,388,640</b>	<b>10,870,003</b>	<b>11,418,724</b>	<b>12,040,764</b>	<b>12,742,716</b>	<b>13,554,615</b>	<b>14,431,342</b>	<b>15,412,200</b>	<b>16,506,988</b>	<b>17,726,517</b>
<b>Operating Income</b>	<b>3,664,418</b>	<b>6,177,618</b>	<b>7,547,990</b>	<b>9,277,995</b>	<b>11,067,526</b>	<b>12,888,762</b>	<b>14,788,267</b>	<b>16,727,259</b>	<b>16,478,330</b>	<b>16,015,906</b>
Other income (interest on cash)	34,334	92,024	197,553	301,896	379,721	457,972	567,125	681,033	787,804	950,730
Gain / (loss) on sale of office equipment	-	-	-	-	219,000	-	-	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	502,393	-	-	-	-	-
<b>Earnings Before Interest &amp; Taxes</b>	<b>3,698,752</b>	<b>6,269,642</b>	<b>7,745,543</b>	<b>9,579,891</b>	<b>12,168,640</b>	<b>13,346,734</b>	<b>15,355,392</b>	<b>17,408,292</b>	<b>17,266,133</b>	<b>16,966,637</b>
Tax	544,688	1,314,374	1,830,940	2,472,961	3,379,024	3,791,356	4,494,387	5,212,902	5,163,146	5,058,322
<b>NET PROFIT/(LOSS) AFTER TAX</b>	<b>3,154,064</b>	<b>4,955,267</b>	<b>5,914,603</b>	<b>7,106,929</b>	<b>8,789,616</b>	<b>9,555,377</b>	<b>10,861,005</b>	<b>12,195,390</b>	<b>12,102,987</b>	<b>11,908,314</b>

## 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
<b>Assets</b>											
<i>Current assets</i>											
Cash & Bank	1,255,636	1,491,059	5,870,834	9,933,390	14,218,270	16,159,441	20,478,302	24,891,723	29,590,934	33,433,358	42,625,072
Accounts receivable		4,716,739.73	5,106,808	5,841,823	6,573,788	7,378,794	8,247,867	9,185,399	10,196,065	10,994,469	11,550,370
Finished goods inventory		921,999	1,039,813	1,174,782	1,322,067	1,482,151	1,656,068	1,844,938	2,049,970	2,169,097	2,296,138
Equipment spare part inventory	10,281	12,521	14,868	17,564	20,657	24,200	28,252	32,880	36,290	40,010	-
Raw material inventory	1,302,488	1,586,212	1,883,537	2,225,149	2,617,003	3,065,809	3,579,125	4,165,461	4,597,461	5,068,701	-
Pre-paid annual land lease	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	240,000	264,000	290,400	319,440	351,384	386,522	425,175	467,692	514,461	565,907	-
Pre-paid insurance	398,022	351,940	305,858	259,776	213,694	268,750	215,000	161,250	107,500	53,750	-
<b>Total Current Assets</b>	<b>3,206,427</b>	<b>9,344,469</b>	<b>14,512,117</b>	<b>19,771,924</b>	<b>25,316,863</b>	<b>28,765,667</b>	<b>34,629,789</b>	<b>40,749,343</b>	<b>47,092,682</b>	<b>52,325,292</b>	<b>56,471,581</b>
<i>Fixed assets</i>											
Security Deposit for Rental Building	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000
Machinery & equipment	9,577,800	8,620,020	7,662,240	6,704,460	5,746,680	4,788,900	3,831,120	2,873,340	1,915,560	957,780	-
Furniture & fixtures	328,750	295,875	263,000	230,125	197,250	164,375	131,500	98,625	65,750	32,875	-
Office vehicles	1,255,982	1,004,786	753,589	502,393	251,196	2,022,772	1,618,217	1,213,663	809,109	404,554	-
Office equipment	547,500	438,000	328,500	219,000	109,500	698,764	559,011	419,258	279,506	139,753	-
<b>Total Fixed Assets</b>	<b>11,950,032</b>	<b>10,598,681</b>	<b>9,247,329</b>	<b>7,895,978</b>	<b>6,544,626</b>	<b>7,914,811</b>	<b>6,379,849</b>	<b>4,844,886</b>	<b>3,309,924</b>	<b>1,774,962</b>	<b>240,000</b>
<i>Intangible assets</i>											
Pre-operation costs	1,310,000	1,048,000	786,000	524,000	262,000	-	-	-	-	-	-
<b>Total Intangible Assets</b>	<b>1,310,000</b>	<b>1,048,000</b>	<b>786,000</b>	<b>524,000</b>	<b>262,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL ASSETS</b>	<b>16,466,459</b>	<b>20,991,150</b>	<b>24,545,447</b>	<b>28,191,902</b>	<b>32,123,489</b>	<b>36,680,478</b>	<b>41,009,637</b>	<b>45,594,229</b>	<b>50,402,606</b>	<b>54,100,254</b>	<b>56,711,581</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable		1,370,627	1,591,523	1,803,788	2,034,163	2,284,032	2,554,887	2,848,333	3,156,286	3,327,516	3,273,447
<b>Total Current Liabilities</b>	<b>-</b>	<b>1,370,627</b>	<b>1,591,523</b>	<b>1,803,788</b>	<b>2,034,163</b>	<b>2,284,032</b>	<b>2,554,887</b>	<b>2,848,333</b>	<b>3,156,286</b>	<b>3,327,516</b>	<b>3,273,447</b>
<i>Shareholders' equity</i>											
Paid-up capital	16,466,459	16,466,459	16,466,459	16,466,459	16,466,459	16,466,459	16,466,459	16,466,459	16,466,459	16,466,459	16,466,459
Retained earnings		3,154,064	6,487,465	9,921,655	13,622,867	17,929,987	21,988,291	26,279,437	30,779,862	34,306,279	36,971,675
<b>Total Equity</b>	<b>16,466,459</b>	<b>19,620,523</b>	<b>22,953,924</b>	<b>26,388,114</b>	<b>30,089,326</b>	<b>34,396,446</b>	<b>38,454,750</b>	<b>42,745,896</b>	<b>47,246,321</b>	<b>50,772,738</b>	<b>53,438,134</b>
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>16,466,459</b>	<b>20,991,150</b>	<b>24,545,447</b>	<b>28,191,902</b>	<b>32,123,489</b>	<b>36,680,478</b>	<b>41,009,637</b>	<b>45,594,229</b>	<b>50,402,606</b>	<b>54,100,254</b>	<b>56,711,581</b>

## 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		3,154,064	4,955,267	5,914,603	7,106,929	8,789,616	9,555,377	10,861,005	12,195,390	12,102,987	11,908,314
Add: depreciation expense		1,351,351	1,351,351	1,351,351	1,351,351	1,351,351	1,534,962	1,534,962	1,534,962	1,534,962	1,534,962
amortization of pre-operating costs		262,000	262,000	262,000	262,000	262,000	-	-	-	-	-
Accounts receivable		(4,716,740)	(390,068)	(735,015)	(731,965)	(805,006)	(869,072)	(937,532)	(1,010,666)	(798,404)	(555,901)
Finished goods inventory		(921,999)	(117,814)	(134,969)	(147,284)	(160,084)	(173,918)	(188,870)	(205,032)	(119,127)	(127,041)
Equipment inventory	(10,281)	(2,240)	(2,347)	(2,697)	(3,093)	(3,543)	(4,052)	(4,628)	(3,410)	(3,720)	40,010
Raw material inventory	(1,302,488)	(283,724)	(297,326)	(341,612)	(391,854)	(448,806)	(513,316)	(586,336)	(432,001)	(471,240)	5,068,701
Pre-paid building rent	(240,000)	(24,000)	(26,400)	(29,040)	(31,944)	(35,138)	(38,652)	(42,517)	(46,769)	(51,446)	565,907
Advance insurance premium	(398,022)	46,082	46,082	46,082	46,082	(55,056)	53,750	53,750	53,750	53,750	53,750
Accounts payable		1,370,627	220,895	212,266	230,375	249,869	270,855	293,446	307,953	171,230	(54,069)
Cash provided by operations	(1,950,791)	235,423	6,001,641	6,542,970	7,690,597	9,145,203	9,815,934	10,983,280	12,394,177	12,418,993	18,434,633
<i>Financing activities</i>											
Issuance of shares	16,466,459	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	16,466,459	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(13,260,032)	-	-	-	-	(2,721,536)	-	-	-	-	-
Cash (used for) / provided by investing activities	(13,260,032)	-	-	-	-	(2,721,536)	-	-	-	-	-
<b>NET CASH</b>	<b>1,255,636</b>	<b>235,423</b>	<b>6,001,641</b>	<b>6,542,970</b>	<b>7,690,597</b>	<b>6,423,667</b>	<b>9,815,934</b>	<b>10,983,280</b>	<b>12,394,177</b>	<b>12,418,993</b>	<b>18,434,633</b>

## 13 KEY ASSUMPTIONS

### 13.1 Operating Cost Assumptions

Description	Details
Operating Costs Growth Rate	5.0%
Administration Benefits Expense	15.0% of Admin Expense
Travelling Expense	15.0% of Admin Expense
Communication Expense	8.0% of Admin Expense
Office Vehicles Running Expense	25.0% of Vehicles Cost
Office Expenses (Stationary, Entertainment, Janitorial Services, Etc.)	15.0% of Admin Expense
Promotional Expense	1.0% of Revenue
Machinery and Equipment Insurance Rate	3.5%
Professional Fees (Legal, Audit, Consultants, Etc.)	0.5% of Revenue
Bad Debt Expense	2.0% of Revenue
Miscellaneous Expense	5.0% of Admin Expense
Depreciation Method	Straight Line
Depreciation Rate	10% on Machinery & Equipment and Furniture & Fixture 20% on Office Equipment and Vehicle

### 13.2 Production Cost Assumptions

Description	Details
Melamine Moulding Compound and Glaze	Rs. 2,087 (Per Dinner Set)
Printed Paper sheet to Emboss	Rs. 130 (Per Dinner Set)
Packaging	Rs. 270 (Per Box Per Dinner Set)
Cost Of Goods Sold Growth Rate	5.0%
Hours Operational / Day	8

Shift Length (Hours)	8
Days Operational / Year	300

### 13.3 Revenue Assumptions

Description	Details
Production Capacity 100%	24,000 Dinner Set
A-Grade Production 80%	19,200 Dinner Set
B-Grade Production 20%	4,800 Dinner Set
Sale Price A-Grade	Rs.4,600
Sale Price B-Grade	Rs.1,950
Sale Price Growth Rate	5%
Production Capacity Utilization	60%
Production Capacity Utilization Growth Rate	5%
Maximum Capacity Utilization	95%

# Small and Medium Enterprises Development Authority

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