

PROJECT REPORT

Of

MATCHBOX

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Matchbox**.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]



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PROJECT AT A GLANCE

- 1 Name of the Entrepreneur : xxxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxxxx
Pin: xxxxxxxx State: xxxxxxxxxx
Mobile xxxxxxxx
- 5 Product and By Product : **MATCHBOX**
- 6 Name of the project / business activity proposed : **MATCHBOX MANUFACTURING UNIT**
- 7 Cost of Project : Rs.24.61 Lakhs
- 8 Means of Finance
Term Loan Rs.15.55 Lakhs
Own Capital Rs.2.46 Lakhs
Working Capital Rs.6.6 Lakhs
- 9 Debt Service Coverage Ratio : 2.37
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 41%
- 13 Employment : 13 Persons
- 14 Power Requirement : 15 HP
- 15 Major Raw materials : Wood, Cardboard, Chemicals and consumables,Packing material
- 16 Estimated Annual Sales Turnover (Max Utilized Capacity) : 122.18 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lakhs)

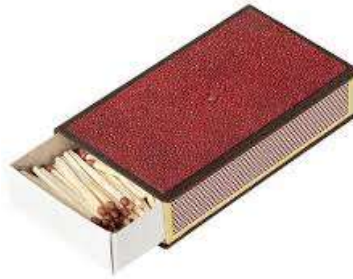
Particulars	Amount
Land	Own/Rented
Building /Shed 1500 Sq ft	Own/Rented
Plant & Machinery	16.28
Furniture & Fixtures	1.00
Working Capital	7.33
Total	24.61

MEANS OF FINANCE

Particulars	Amount
Own Contribution	2.46
Term Loan	15.55
Working Capital	6.60
Total	24.61

MATCH BOX

PRODUCT INTRODUCTION: A matchbox is a box made of cardboard or thin wood and designed to hold matches. It usually has a coarse striking surface on one edge for lighting the matches contained inside. A safety match can only light when someone strikes it against the striking surface on the side of the match box. A “striking surface” is made of sand, powdered glass and a chemical called “red phosphorous”. A simple match box is cuboid in shape.



USES & MARKET POTENTIAL: Matchsticks are a very handy tool used in starting a fire. They are used in the kitchen to light gas and kerosene. Other application involves starting a fireplace, industrial burners, camp fire or to light candles. Matchsticks are made from wood or cardboard strips. Matchsticks are used to start fire under controlled conditions, They are also used in industry for starting fire when heat energy is needed and for burning waste materials.

India makes four crore matchboxes per day and these are the cheapest in the world. Every third matchbox used in the world is Indian. The industry produces 90 million bundles a year; each bundle has 600 matchboxes and each box has between 40 and 50 sticks. As matchsticks are fast moving consumer goods, they demand branding activity to get the market share. Matchsticks are sold in volume. The success of this business depends on the strong channel network.

MACHINERY REQUIREMENT:

Basic Machineries requirement are as follows:

1. Chain Saw



A chainsaw (alternatively spelled chain saw) is a portable, mechanical saw which cuts with a set of teeth attached to a rotating chain that runs along a guide bar. It is used in activities such as tree felling, lumbering, bucking, pruning, cutting firebreaks in wild land and harvesting of firewood.

2. Log Debarker



It's a machine which is used to remove bark from the tree logs utilizing appropriate cutters and mechanism.

3. Veneer Peeling Machine



It's a machine designed to peel the debarked log into an appropriate thickness veneer sheet.

4. Veneer Chopping Machine



It's used to slice the given veneer sheet into items of required dimensions.

5. Rotating Drum Dryer



The rotary drum dryer is a hot air type of dryer, which dries objects in between 90 to 95 % dry solids. The material is gently dried as it cascades through the hot air flow.

6. Vat



They are a type of tank used to store or hold appropriate items.

7. Feed Hopper



It's an equipment designed to feed the given process material to the appropriate processing unit for processing of product at required capped feed rate and orientation.

8. Perforated Belt Conveyor



It's a specialized conveyor with perforated belt so as to hold particular type of material or to drain unwanted liquid.

9. Open Chemical Tanks



Open Chemical tanks are used to store various chemicals for processing of certain objects, which include operation ranging from coating to cleaning.

10. Matchbox Making Machine (with Coating Unit)



This is an automatic machine used to make matchboxes in which matchsticks are kept.

11. Matchstick Filling Machine



This machine is used to fill the matchstick into the boxes in appropriate quantity.

12. Counting and Packaging Machine



This machine counts the small unit load and packs it into single large unit after fixed count set by its controller.

RAW MATERIAL: Basic raw material are as follows:

1. Wood
2. Cardboard
3. Chemicals & other consumables (like Red phosphorous)
4. Paper and Packing Material

MANUFACTURING PROCESS: Process is mentioned below:

1. **Matchstick Manufacturing:** Lumber is cut into suitable lengths by a chain saw. After the peeling of the bark, the log is peeled into veneer-like thin long shavings by the peeling machine. Then the veneer is split and chopped to the designated stick size by the chopping machine. Then the sticks are soaked in a dilute solution of ammonium phosphate and dried. The matches are then dumped into feed hopper, which lines them up. A perforated belt holds them upside down while they are dipped in a series of three tanks. The matches are dried for 50-60 minutes before they are packed.

2. **Matchbox Manufacturing:** In this step match boxes are manufactured to contain match sticks. Printed sheets for outer boxes delivered from printing houses are cut, folded and glued by the paper box making machine so as to obtain match box containers and covers.
3. **Filling:** The match sticks are filled into the match box by the automatic filling machine
4. **Finishing Process:** In this process, the chemical coating machine applies chemical to the match boxes, which have been filled with match sticks by the box filling machine as they come to trays.
5. **Packaging:** In this process the match boxes are counted and packed in larger unit packaging by a counting and packaging machine, which are further packed in cardboard and sent for sale.

PROJECTED BALANCE SHEET

PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
<u>Capital Account</u>					
Opening Balance	-	3.21	4.78	7.83	11.48
Add: Additions	2.46	-	-	-	-
Add: Net Profit	2.25	3.57	6.55	9.65	12.11
Less: Drawings	1.50	2.00	3.50	6.00	9.00
Closing Balance	3.21	4.78	7.83	11.48	14.58
CC Limit	6.60	6.60	6.60	6.60	6.60
Term Loan	13.82	10.37	6.91	3.46	-
Sundry Creditors	0.60	0.69	0.79	0.90	1.01
TOTAL :	24.23	22.43	22.13	22.43	22.19
<u>APPLICATION OF FUND</u>					
Fixed Assets (Gross)	17.28	17.28	17.28	17.28	17.28
Gross Dep.	2.54	4.71	6.55	8.13	9.47
Net Fixed Assets	14.74	12.57	10.73	9.15	7.81
<u>Current Assets</u>					
Sundry Debtors	4.64	5.53	6.33	7.20	8.15
Stock in Hand	3.38	3.80	4.31	4.84	5.42
Cash and Bank	1.47	0.53	0.76	1.22	0.81
TOTAL :	24.23	22.43	22.13	22.43	22.19
	-	-	-	-	-

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	I	II	III	IV	V
<u>A) SALES</u>					
Gross Sale	69.60	82.91	94.99	108.06	122.18
Total (A)	69.60	82.91	94.99	108.06	122.18
<u>B) COST OF SALES</u>					
Raw Mateiral Consumed	36.00	41.58	47.52	53.82	60.48
Electricity Expenses	1.46	1.60	1.75	1.89	2.04
Repair & Maintenance	0.35	0.41	0.47	0.54	0.61
Labour & Wages	10.76	11.83	13.02	14.32	15.75
Depreciation	2.54	2.17	1.85	1.57	1.34
Cost of Production	51.10	57.60	64.60	72.14	80.22
Add: Opening Stock /WIP	-	1.70	1.86	2.09	2.33
Less: Closing Stock /WIP	1.70	1.86	2.09	2.33	2.59
Cost of Sales (B)	49.40	57.44	64.38	71.90	79.96
C) GROSS PROFIT (A-B)	20.20	25.47	30.61	36.16	42.22
	29.02%	30.72%	32.23%	33.46%	34.56%
D) Bank Interest (Term Loan)	1.69	1.38	1.00	0.62	0.24
ii) Interest On Working Capital	0.73	0.73	0.73	0.73	0.73
E) Salary to Staff	8.58	9.44	10.38	11.42	12.56
F) Selling & Adm Expenses Exp.	6.96	10.36	11.87	13.51	15.27
TOTAL (D+E)	17.95	21.91	23.98	26.27	28.80
H) NET PROFIT	2.25	3.57	6.63	9.89	13.42
	3.2%	4.3%	7.0%	9.2%	11.0%
I) Taxation	-	-	0.08	0.24	1.31
J) PROFIT (After Tax)	2.25	3.57	6.55	9.65	12.11

PROJECTED CASH FLOW STATEMENT

PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
Own Contribution	2.46	-			
Net Profit	2.25	3.57	6.63	9.89	13.42
Depreciation & Exp. W/off	2.54	2.17	1.85	1.57	1.34
Increase In Cash Credit	6.60				
Increase In Term Loan	15.55	-	-	-	-
Increase in Creditors	0.60	0.09	0.10	0.11	0.11
TOTAL :	30.00	5.83	8.58	11.57	14.87
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	17.28	-	-	-	-
Increase in Stock	3.38	0.42	0.50	0.54	0.57
Increase in Debtors	4.64	0.89	0.81	0.87	0.94
Repayment of Term Loan	1.73	3.46	3.46	3.46	3.46
Taxation	-	-	0.08	0.24	1.31
Drawings	1.50	2.00	3.50	6.00	9.00
TOTAL :	28.53	6.76	8.35	11.11	15.28
Opening Cash & Bank Balance	-	1.47	0.53	0.76	1.22
Add : Surplus	1.47	- 0.94	0.23	0.46	- 0.41
Closing Cash & Bank Balance	1.47	0.53	0.76	1.22	0.81

COMPUTATION OF MATCHBOX MANUFACTURING UNIT**Items to be Manufactured MATCHBOX**

	1 Box	10	Packets
Manufacturing Capacity per Day		6,000.00	BOX
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		1,800,000	BOX
Year		Capacity Utilisation	MATCHBOX
I		50%	900,000
II		55%	990,000
III		60%	1,080,000
IV		65%	1,170,000
V		70%	1,260,000

COMPUTATION OF RAW MATERIAL

Item Name	Quantity of Raw Material	Unit	Unit Rate of	Total Cost Per Annum (100%)
Wood	200,000	Kg	22	4,400,000
Cardboard	50,000	Kg	45	2,250,000
Chemical & Consumables	Lumsum		-	250,000
Packing Material	Lumsum		-	300,000
Total	250,000.00			7,200,000.00

Total Raw material in Rs lacs at 100% Capacity 72.00
 Cost per Box (In Rs) **4.00**

Raw Material Consumed	Capacity Utilisation	Rate	Amount (Rs.)
I	50%	4.00	36.00
II	55%	4.20	41.58
III	60%	4.40	47.52
IV	65%	4.60	53.82
V	70%	4.80	60.48

COMPUTATION OF SALE

Particulars	I	II	III	IV	V
Op Stock	-	30,000.00	33,000.00	36,000.00	39,000.00
Production	900,000.00	990,000.00	1,080,000.00	1,170,000.00	1,260,000.00
Less : Closing Stock(10 Days)	30,000.00	33,000.00	36,000.00	39,000.00	42,000.00
Net Sale	870,000.00	987,000.00	1,077,000.00	1,167,000.00	1,257,000.00
Sale Price per Box	8.00	8.40	8.82	9.26	9.72
Sale (in Lacs)	69.60	82.91	94.99	108.06	122.18

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

PARTICULARS	I	II	III	IV	V
<u>Finished Goods</u>					
(10 Days requirement)	1.70	1.86	2.09	2.33	2.59
<u>Raw Material</u>					
(14 Days requirement)	1.68	1.94	2.22	2.51	2.82
Closing Stock	3.38	3.80	4.31	4.84	5.42

COMPUTATION OF WORKING CAPITAL REQUIREMENT

Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	3.38		
Less:			
Sundry Creditors	0.60		
Paid Stock	2.78	0.28	2.51
Sundry Debtors	4.64	0.46	4.18
Working Capital Requirement			6.68
Margin			0.74
MPBF			6.68
Working Capital Demand			6.60

BREAK UP OF LABOUR

Particulars	Wages	No of	Total
	Per Month	Employees	Salary
Supervisor	20,000.00	1	20,000.00
Plant Operator	15,000.00	1	15,000.00
Unskilled Worker	8,500.00	4	34,000.00
Helper	5,000.00	1	5,000.00
Security Guard	7,500.00	1	7,500.00
			81,500.00
Add: 10% Fringe Benefit			8,150.00
Total Labour Cost Per Month			89,650.00
Total Labour Cost for the year (In Rs. Lakhs)		8	10.76

BREAK UP OF SALARY

Particulars	Salary	No of	Total
	Per Month	Employees	Salary
Accountant cum store keeper	15,000.00	1	15,000.00
Administrative Staffs	12,500.00	4	50,000.00
Total Salary Per Month			65,000.00
Add: 10% Fringe Benefit			6,500.00
Total Salary for the month			71,500.00
Total Salary for the year (In Rs. Lakhs)		5	8.58

COMPUTATION OF DEPRECIATION

Description	Land	Building/shed	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation			15.00%	10.00%	
Opening Balance		Own/Rented	-	-	-
Addition	-		16.28	1.00	17.28
	-		16.28	1.00	17.28
TOTAL		-	16.28	1.00	17.28
Less : Depreciation	-	-	2.44	0.10	2.54
WDV at end of Ist year	-	-	13.84	0.90	14.74
Additions During The Year	-	-	-	-	-
	-	-	13.84	0.90	14.74
Less : Depreciation	-	-	2.08	0.09	2.17
WDV at end of IIInd Year	-	-	11.76	0.81	12.57
Additions During The Year	-	-	-	-	-
	-	-	11.76	0.81	12.57
Less : Depreciation	-	-	1.76	0.08	1.85
WDV at end of IIIrd year	-	-	10.00	0.73	10.73
Additions During The Year	-	-	-	-	-
	-	-	10.00	0.73	10.73
Less : Depreciation	-	-	1.50	0.07	1.57
WDV at end of IV year	-	-	8.50	0.66	9.15
Additions During The Year	-	-	-	-	-
	-	-	8.50	0.66	9.15
Less : Depreciation	-	-	1.27	0.07	1.34
WDV at end of Vth year	-	-	7.22	0.59	7.81

REPAYMENT SCHEDULE OF TERM LOAN

11.0%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	15.55	15.55	0.43	-	15.55
	IInd Quarter	15.55	-	15.55	0.43	-	15.55
	IIIrd Quarter	15.55	-	15.55	0.43	0.86	14.69
	Ivth Quarter	14.69	-	14.69	0.40	0.86	13.82
					1.69	1.73	
II	Opening Balance						
	Ist Quarter	13.82	-	13.82	0.38	0.86	12.96
	IInd Quarter	12.96	-	12.96	0.36	0.86	12.10
	IIIrd Quarter	12.10	-	12.10	0.33	0.86	11.23
	Ivth Quarter	11.23		11.23	0.31	0.86	10.37
					1.38	3.46	
III	Opening Balance						
	Ist Quarter	10.37	-	10.37	0.29	0.86	9.50
	IInd Quarter	9.50	-	9.50	0.26	0.86	8.64
	IIIrd Quarter	8.64	-	8.64	0.24	0.86	7.78
	Ivth Quarter	7.78		7.78	0.21	0.86	6.91
					1.00	3.46	
IV	Opening Balance						
	Ist Quarter	6.91	-	6.91	0.19	0.86	6.05
	IInd Quarter	6.05	-	6.05	0.17	0.86	5.18
	IIIrd Quarter	5.18	-	5.18	0.14	0.86	4.32
	Ivth Quarter	4.32		4.32	0.12	0.86	3.46
					0.62	3.46	
V	Opening Balance						
	Ist Quarter	3.46	-	3.46	0.10	0.86	2.59
	IInd Quarter	2.59	-	2.59	0.07	0.86	1.73
	IIIrd Quarter	1.73	-	1.73	0.05	0.86	0.86
	Ivth Quarter	0.86		0.86	0.02	0.86	0.00
					0.24	3.46	

Door to Door Period 60 Months
Moratorium Period 6 Months
Repayment Period 54 Months

CALCULATION OF D.S.C.R

PARTICULARS	I	II	III	IV	V
<u>CASH ACCRUALS</u>	4.79	5.73	8.40	11.22	13.45
Interest on Term Loan	1.69	1.38	1.00	0.62	0.24
Total	6.48	7.11	9.40	11.84	13.69
<u>REPAYMENT</u>					
Repayment of Term Loan	1.73	3.46	3.46	3.46	3.46
Interest on Term Loan	1.69	1.38	1.00	0.62	0.24
Total	3.41	4.83	4.45	4.07	3.69
DEBT SERVICE COVERAGE RATIO	1.90	1.47	2.11	2.91	3.71
AVERAGE D.S.C.R.			2.37		

COMPUTATION OF ELECTRICITY**(A) POWER CONNECTION**

Total Working Hour per day	Hours	8	
Electric Load Required	HP	15	
Load Factor		0.7460	
Electricity Charges	per unit	7.50	
Total Working Days		300	
Electricity Charges			2.01
Add : Minimim Charges (@ 10%)			

(B) DG set

No. of Working Days		300	days
No of Working Hours		0.5	Hour per day
Total no of Hour		150	
Diesel Consumption per Hour		8	
Total Consumption of Diesel		1,200	
Cost of Diesel		65.00	Rs. /Ltr
Total cost of Diesel		0.78	
Add : Lube Cost @15%		0.12	
Total		0.90	
Total cost of Power & Fuel at 100%			2.91

Year	Capacity	Amount (in Lacs)
I	50%	1.46
II	55%	1.60
III	60%	1.75
IV	65%	1.89
V	70%	2.04

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