

# **PROJECT REPORT**

**Of**

# **DUPLEX BOARD**

## **PURPOSE OF THE DOCUMENT**

This particular pre-feasibility is regarding Duplex Board Manufacturing unit.

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 : xxxxxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxxxx
- Pin: xxxxxxxx State: xxxxx
- Mobile xxxxxxxx
- 5 Product and By Product : **DUPLEX BOARD**
- 6 Name of the project / business activity proposed : **DUPLEX BOARD MANUFACTURING UNIT**
- 7 Cost of Project : Rs.15.79 Lakhs
- 8 Means of Finance
- Term Loan Rs.9.09 Lakhs
- Own Capital Rs.1.58 Lakhs
- Working Capital Rs.5.12 Lakhs
- 9 Debt Service Coverage Ratio : 2.84
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 42%
- 13 Employment : 12 Persons
- 14 Power Requirement : 30.00 HP
- 15 Major Raw materials : Cardboard & Adhesive
- 16 Estimated Annual Sales Turnover (Max Capacity) : 102.53 Lakhs
- 17 Detailed Cost of Project & Means of Finance

**COST OF PROJECT**

(Rs. In Lakhs)

Particulars	Amount
Land	Own/Rented
Plant & Machinery	9.50
Furniture & Fixtures	0.60
Working Capital	5.69
<b>Total</b>	<b>15.79</b>

**MEANS OF FINANCE**

Particulars	Amount
Own Contribution	1.58
Working Capital(Finance)	5.12
Term Loan	9.09
<b>Total</b>	<b>15.79</b>

# **DUPLEX BOARD MANUFACTURING UNIT**

## **Introduction:**

Duplex Board is a kind of paperboard or cardboard, also named greyboard, due to its double side grey color. It consists of two layers, or plies, so people call it duplex board. The exterior one side of the board often is coated with a bright white appearance to give it a glossy sheen. Coated duplex board one side with a glossy coated surface suit for superior printability. The advantage of the duplex board is rigid, durable, straight. In Box Packaging Solution team, usually, we use it to make luxury rigid gift boxes, like rigid shoe boxes, garment boxes, and toys packing. Because of the outstanding paper stiffness, which is strong support for the box die-cutting process, and laminating hot stamping results. Also, it could be used for making containers to pack wine and liquor packaging. The uncoated duplex board always be wrapped with art paper and specialty paper to build rigid boxes with fantastic artwork printing.



## **Uses & Market Potential:**

Duplex board is tough, thin and able to take on a bright white appearance, unlike common corrugated cardboard. It is commonly used to create boxes for a variety of small goods. For example, it is often used in pharmaceutical packaging. The duplex board is a new product and requires considerable efforts in introducing it into the market. The acceptance of the product is increasing day by day. Presently, the boards are marketed through converters who directly use the boards to manufacture finish product. There is a huge demand of duplex board in India and all over the world. The Duplex Board market revenue was 2110 Million USD in 2019, and will reach 2881 Million USD in 2025, with a CAGR of 5.32% during 2020- 2025. Moreover, continuous growing economies, urbanization or residential sector development, and various supportive government policies are attributing towards the production and consumption of duplex board in both developed and developing countries across the globe.

## **Product:**

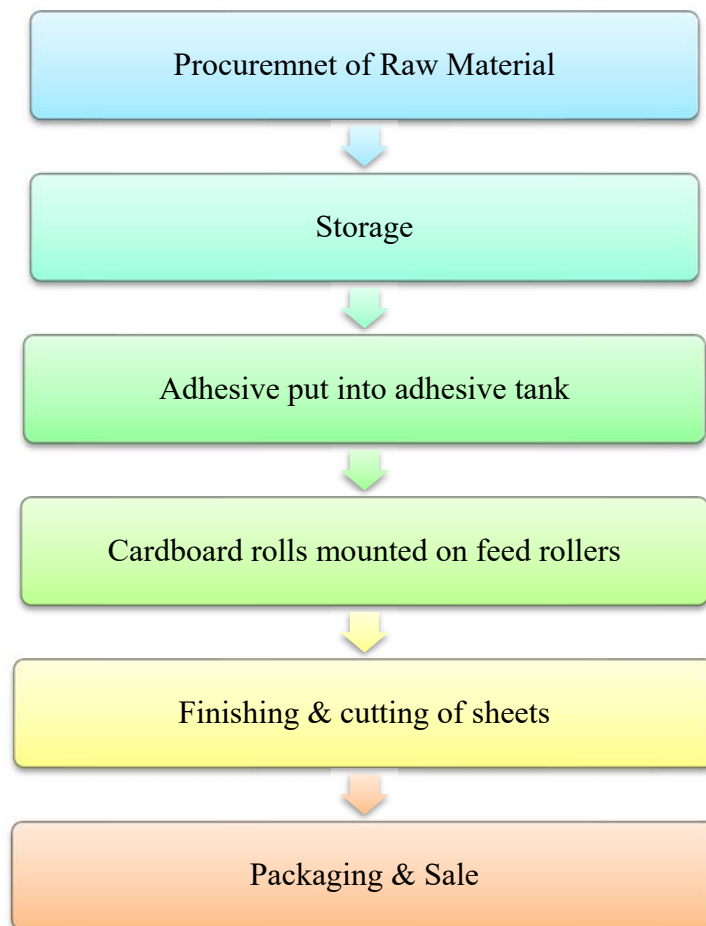
Duplex Board

## **Raw Material:**

The raw materials required are:

- Cardboard
- Adhesive

## **Manufacturing Process:**



## **Area:**

The industrial setup requires space for Inventory, workshop or manufacturing area, space for power supply utilities and polishing area. Also, some of the area of building is required for office staff facilities, office furniture, etc. Thus, the approximate total area required for complete industrial setup is 1200-1800Sqft.

## **Cost of Machines:**

<b>Machine</b>	<b>Quantity</b>	<b>Price</b>
Duplex Board Machine	1	850000
Other equipment's	-	100000
<b>TOTAL</b>		<b>950000</b>

**Power Requirement-** The estimated Power requirement is taken at 30 HP.

**Manpower Requirement-** Following manpower is required:

- Machine operator-2
- Skilled/unskilled worker-3
- Helper-4
- Manager cum Accountant-1
- Sales Personnel-2

# **FINANCIALS**

<b><u>PROJECTED BALANCE SHEET</u></b>					
<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b><u>SOURCES OF FUND</u></b>					
<b><u>Capital Account</u></b>					
Opening Balance	-	2.19	3.29	4.66	6.59
Add: Additions	1.58	-	-	-	-
Add: Net Profit	3.41	4.29	4.97	5.92	6.95
Less: Drawings	2.80	3.20	3.60	4.00	5.00
<b>Closing Balance</b>	<b>2.19</b>	<b>3.29</b>	<b>4.66</b>	<b>6.59</b>	<b>8.54</b>
CC Limit	5.12	5.12	5.12	5.12	5.12
Term Loan	8.08	6.06	4.04	2.02	-
Sundry Creditors	1.80	2.02	2.25	2.48	2.73
<b>TOTAL :</b>	<b>17.20</b>	<b>16.49</b>	<b>16.07</b>	<b>16.21</b>	<b>16.39</b>
<b><u>APPLICATION OF FUND</u></b>					
<b>Fixed Assets ( Gross)</b>	<b>10.10</b>	<b>10.10</b>	<b>10.10</b>	<b>10.10</b>	<b>10.10</b>
Gross Dep.	1.49	2.75	3.83	4.75	5.53
Net Fixed Assets	8.62	7.35	6.27	5.35	4.57
<b>Current Assets</b>					
Sundry Debtors	2.99	3.53	3.93	4.35	4.78
Stock in Hand	4.50	5.03	5.57	6.13	6.72
Cash and Bank	1.09	0.59	0.30	0.38	0.32
<b>TOTAL :</b>	<b>17.20</b>	<b>16.49</b>	<b>16.07</b>	<b>16.21</b>	<b>16.39</b>
	-	-	-	-	-

**PROJECTED PROFITABILITY STATEMENT**

<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b><u>A) SALES</u></b>					
Gross Sale	64.13	75.56	84.25	93.24	102.53
<b>Total (A)</b>	<b>64.13</b>	<b>75.56</b>	<b>84.25</b>	<b>93.24</b>	<b>102.53</b>
<b><u>B) COST OF SALES</u></b>					
Raw Material Consumed	36.00	40.39	44.95	49.67	54.56
Electricity Expenses	3.36	3.69	4.03	4.36	4.70
Repair & Maintenance	1.60	1.89	2.11	2.33	2.56
Labour & Wages	11.59	12.98	14.28	15.71	17.28
Depreciation	1.49	1.27	1.08	0.92	0.78
<b>Cost of Production</b>	<b>54.04</b>	<b>60.22</b>	<b>66.44</b>	<b>72.99</b>	<b>79.88</b>
<b>Add: Opening Stock /WIP</b>	<b>-</b>	<b>2.70</b>	<b>3.01</b>	<b>3.32</b>	<b>3.65</b>
<b>Less: Closing Stock /WIP</b>	<b>2.70</b>	<b>3.01</b>	<b>3.32</b>	<b>3.65</b>	<b>3.99</b>
<b>Cost of Sales (B)</b>	<b>51.34</b>	<b>59.91</b>	<b>66.13</b>	<b>72.66</b>	<b>79.54</b>
<b>C) GROSS PROFIT (A-B)</b>	<b>12.79</b>	<b>15.64</b>	<b>18.12</b>	<b>20.58</b>	<b>22.99</b>
	<b>19.95%</b>	<b>20.70%</b>	<b>21.51%</b>	<b>22.07%</b>	<b>22.42%</b>
D) Bank Interest i) (Term Loan )	0.99	0.81	0.58	0.36	0.14
ii) Interest On Working Capital	0.56	0.56	0.56	0.56	0.56
E) Salary to Staff	7.06	8.47	9.14	10.06	10.86
F) Selling & Adm Expenses Exp.	0.77	1.51	2.70	3.26	3.79
<b>G) TOTAL (D+E+F)</b>	<b>9.38</b>	<b>11.35</b>	<b>12.99</b>	<b>14.25</b>	<b>15.36</b>
<b>H) NET PROFIT</b>	<b>3.41</b>	<b>4.29</b>	<b>5.13</b>	<b>6.33</b>	<b>7.63</b>
	<b>5.3%</b>	<b>5.7%</b>	<b>6.1%</b>	<b>6.8%</b>	<b>7.4%</b>
I) Taxation	-	-	0.16	0.41	0.68
<b>J) PROFIT (After Tax)</b>	<b>3.41</b>	<b>4.29</b>	<b>4.97</b>	<b>5.92</b>	<b>6.95</b>



**PROJECTED CASH FLOW STATEMENT**

<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b><u>SOURCES OF FUND</u></b>					
Own Contribution	1.58	-	-	-	-
Reserve & Surplus	3.41	4.29	5.13	6.33	7.63
Depreciation & Exp. W/off	1.49	1.27	1.08	0.92	0.78
Increase In Cash Credit	5.12	-	-	-	-
Increase In Term Loan	9.09	-	-	-	-
Increase in Creditors	1.80	0.22	0.23	0.24	0.24
<b>TOTAL :</b>	<b>22.49</b>	<b>5.78</b>	<b>6.44</b>	<b>7.49</b>	<b>8.66</b>
<b><u>APPLICATION OF FUND</u></b>					
Increase in Fixed Assets	10.10	-	-	-	-
Increase in Stock	4.50	0.53	0.54	0.56	0.59
Increase in Debtors	2.99	0.53	0.41	0.42	0.43
Repayment of Term Loan	1.01	2.02	2.02	2.02	2.02
Taxation	-	-	0.16	0.41	0.68
Drawings	2.80	3.20	3.60	4.00	5.00
<b>TOTAL :</b>	<b>21.40</b>	<b>6.28</b>	<b>6.72</b>	<b>7.41</b>	<b>8.72</b>
Opening Cash & Bank Balance	-	1.09	0.59	0.30	0.38
Add : Surplus	1.09	- 0.50	- 0.28	0.08	- 0.06
Closing Cash & Bank Balance	<b>1.09</b>	<b>0.59</b>	<b>0.30</b>	<b>0.38</b>	<b>0.32</b>

**COMPUTATION OF CLOSING STOCK & WORKING CAPITAL**

<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b><u>Finished Goods</u></b>					
(15 Days requirement)	2.70	3.01	3.32	3.65	3.99
<b><u>Raw Material</u></b>					
(15 Days requirement)	1.80	2.02	2.25	2.48	2.73
<b>Closing Stock</b>	<b>4.50</b>	<b>5.03</b>	<b>5.57</b>	<b>6.13</b>	<b>6.72</b>

**COMPUTATION OF WORKING CAPITAL REQUIREMENT**

<b>Particulars</b>	<b>Amount</b>	<b>Margin(10%)</b>	<b>Net Amount</b>
Stock in Hand	4.50		
Less:			
Sundry Creditors	1.80		
<b>Paid Stock</b>	<b>2.70</b>	<b>0.27</b>	<b>2.43</b>
Sundry Debtors	2.99	0.30	2.69
<b>Working Capital Requirement</b>			<b>5.12</b>
<b>Margin</b>			0.57
<b>MPBF</b>			<b>5.12</b>
<b>Working Capital Demand</b>			<b>5.12</b>

<b>REPAYMENT SCHEDULE OF TERM LOAN</b>						11.0%	
<b>Year</b>	<b>Particulars</b>	<b>Amount</b>	<b>Addition</b>	<b>Total</b>	<b>Interest</b>	<b>Repayment</b>	<b>CI Balance</b>
<b>I</b>	Opening Balance						
	Ist Quarter	-	9.09	9.09	0.25	-	9.09
	Iind Quarter	9.09	-	9.09	0.25	-	9.09
	IIIrd Quarter	9.09	-	9.09	0.25	0.51	8.59
	Ivth Quarter	8.59	-	8.59	0.24	0.51	8.08
					0.99	1.01	
<b>II</b>	Opening Balance						
	Ist Quarter	8.08	-	8.08	0.22	0.51	7.58
	Iind Quarter	7.58	-	7.58	0.21	0.51	7.07
	IIIrd Quarter	7.07	-	7.07	0.19	0.51	6.57
	Ivth Quarter	6.57		6.57	0.18	0.51	6.06
					0.81	2.02	
<b>III</b>	Opening Balance						
	Ist Quarter	6.06	-	6.06	0.17	0.51	5.56
	Iind Quarter	5.56	-	5.56	0.15	0.51	5.05
	IIIrd Quarter	5.05	-	5.05	0.14	0.51	4.55
	Ivth Quarter	4.55		4.55	0.12	0.51	4.04
					0.58	2.02	
<b>IV</b>	Opening Balance						
	Ist Quarter	4.04	-	4.04	0.11	0.51	3.54
	Iind Quarter	3.54	-	3.54	0.10	0.51	3.03
	IIIrd Quarter	3.03	-	3.03	0.08	0.51	2.53
	Ivth Quarter	2.53		2.53	0.07	0.51	2.02
					0.36	2.02	
<b>V</b>	Opening Balance						
	Ist Quarter	2.02	-	2.02	0.06	0.51	1.52
	Iind Quarter	1.52	-	1.52	0.04	0.51	1.01
	IIIrd Quarter	1.01	-	1.01	0.03	0.51	0.51
	Ivth Quarter	0.51		0.51	0.01	0.51	-
					0.14	2.02	
Door to Door Period		60	Months				
Moratorium Period		6	Months				
Repayment Period		54	Months				

**CALCULATION OF D.S.C.R**

<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b><u>CASH ACCRUALS</u></b>	4.90	5.56	6.05	6.84	7.74
Interest on Term Loan	0.99	0.81	0.58	0.36	0.14
Total	5.89	6.37	6.64	7.20	7.88
<b><u>REPAYMENT</u></b>					
Repayment of Term Loan	1.01	2.02	2.02	2.02	2.02
Interest on Term Loan	0.99	0.81	0.58	0.36	0.14
Total	2.00	2.83	2.60	2.38	2.16
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.95</b>	<b>2.25</b>	<b>2.55</b>	<b>3.03</b>	<b>3.65</b>
<b>AVERAGE D.S.C.R.</b>			<b>2.84</b>		

### **Assumptions:**

1. Production Capacity of Duplex Board Manufacturing unit is taken at 1000 KG per day. First year, Capacity has been taken @ 50%.
2. Working shift of 10 hours per day has been considered.
3. Raw Material stock and Finished goods closing stock has been taken for 15 days.
4. Credit period to Sundry Debtors has been given for 14 days.
5. Credit period by the Sundry Creditors has been provided for 15 days.
6. Depreciation and Income tax has been taken as per the Income tax Act,1961.
7. Interest on working Capital Loan and Term loan has been taken at 11%.
8. Salary and wages rates are taken as per the Current Market Scenario.
9. Power Consumption has been taken at 30 HP.
10. Selling Prices & Raw material costing has been increased by 3% & 2% respectively in the subsequent years.

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