

# PROJECT REPORT

Of

# PRINTER INK

## PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Printer Ink 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 : **PRINTER INK**
- 6 Name of the project / business activity proposed : **PRINTER INK MANUFACTURING UNIT**
- 7 Cost of Project : Rs.17.56 Lakhs
- 8 Means of Finance
- Term Loan Rs.12.6 Lakhs
- Own Capital Rs.1.76 Lakhs
- Working Capital Rs.3.2 Lakhs
- 9 Debt Service Coverage Ratio : 2.36
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 28%
- 13 Employment : 11 Persons
- 14 Power Requirement : 25.00 HP
- 15 Major Raw materials : Pigments,Binders,extenders and plasticizers
- 16 Estimated Annual Sales Turnover (Max Capacity) : 117.79 Lakhs
- 17 Detailed Cost of Project & Means of Finance

**COST OF PROJECT**

(Rs. In Lakhs)

Particulars	Amount
Land	Own/Rented
Plant & Machinery	13.40
Furniture & Fixtures	0.60
Working Capital	3.56
<b>Total</b>	<b>17.56</b>

**MEANS OF FINANCE**

Particulars	Amount
Own Contribution	1.76
Working Capital(Finance)	3.20
Term Loan	12.60
<b>Total</b>	<b>17.56</b>

# PRINTER INK MANUFACTURING UNIT

## Introduction:

The manufacturing of printing ink enjoys an important place in chemical industry. With the growing demand of a wide spectrum of printing inks and with the advancement of printing processes, the industry offers entrepreneurs the opportunity for career development. Ink is a liquid or paste that contains pigments or dyes. Pigments give ink its colour and they can come from a variety of sources containing nitrogen compounds – commonly known as dyes. In printers, ink is used to produce copies of digital text or images. Over 90% of inks that are produced are printing ink, in which colour is imparted by pigments rather than the dyes used in writing inks. Ink is made with a combination of ingredients including varnish, resin, solvents, pigments, and additives including waxes and lubricants. Black ink is made using carbon black pigments, and white pigments like titanium dioxide can be used to lighten other ink colours.



## **Uses & Market Potential:**

Ink is a gel, sol, or solution that contains at least one colourant, such as a dye or pigment, and is used to color a surface to produce an image, text, or design. Ink is used for drawing or writing with a pen, brush, reed pen, or quill. Thicker inks, in paste form, are used extensively in letterpress and lithographic printing. The printing inks market was valued at USD 16,757.32 million in 2020, and the market is projected to register a CAGR of over 2% during the forecast period (2021-2026). India is among the fast growing printing ink markets globally spurred by the rapid expansion of the domestic print markets. Backed by a strong demand from key end user segments such as package printing, newsprint, publishing and other commercial printing, the printing ink market in India has registered strong growth in the recent years. The printing ink industry is fragmented with over 550 manufacturers and a large number of players in the un-organized sector. Printing ink sector in India is estimated at 4, 10,000 tons for 2021-22, the market witnessed a growth of around 7.5% per annum during the last 10 years. Printed packaging accounts for around 27% of the demand for printing inks in India followed by newspapers at 20%. Commercial printing/ promotional and printed advertising together account for around 19% of the demand.

## **Product:**

Printer Ink

## **Raw Material:**

The raw materials are mentioned below:

- Pigments
- Binders, extenders and plasticizers

## **Manufacturing Process:**

The manufacturing principles apply to the different types of inks (conventional offset inks, UV inks, flexo / gravure inks), involving five essential steps that determine the final properties and performance of the inks. It is therefore useful to be familiar with the main manufacturing parameters and to understand the key steps. The main important goal in ink manufacturing process is to disperse the pigment in a vehicle that can transport the colorant to the substrate . For black news inks, the primary carriers are petroleum oil, soybean oil, or water (for the flexographic printing process). Resins are also introduced to help disperse the pigment and to bind the pigment to the paper after printing. The most obvious role of a pigment is to color the ink. However, pigments can also provide gloss, abrasiveness, and resistance to attack by light, heat, solvents, etc. Special pigments known as extenders and opacifiers are also used. Extenders are transparent pigments which make the colors of other pigments appear less intense, while opacifiers are white pigments, which make the paint opaque so that the surface below the paint cannot be seen. The physical properties of pigments, such as particle size and particle surface, are of great influence in the dispersion process. Primary dispersions for ink production demand that the pigment particles are thoroughly wetted by the liquid phase. The pigment particle size strongly affects the color strength since the smaller particle size has the higher surface area and thus the stronger the color. If this dispersion level is not achieved, printing problems will arise. To achieve the optimum benefits of a pigment, it is necessary to obtain as full a reduction as possible to the primary particle size. The primary feature particle size is 0.5 micron or specific surface area of 30 to 100 m<sup>2</sup>/g. A number of printing inks are completed in a one or two-step mixing/dispersing process which is usually carried out on a high shear mixer to produce ink with acceptable dispersion.

## **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 2000-2500Sqft.

## **Cost of Machines:**

<b>Machine</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount</b>
Ball Mill	1	250000	250000
Triple roll mill	1	500000	500000
Varnish Kettle	1	190000	190000
Planetary Mixer	1	180000	180000
Pot Mill	1	70000	70000
Laboratory and other equipment's	-	-	150000
<b>Total Amount</b>			<b>1340000</b>

**Power Requirement-** The estimated Power requirement is taken at 25 HP.

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

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

# **FINANCIALS**



**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	60.90	75.34	88.75	102.88	117.79
<b>Total (A)</b>	<b>60.90</b>	<b>75.34</b>	<b>88.75</b>	<b>102.88</b>	<b>117.79</b>
<b><u>B) COST OF SALES</u></b>					
Raw Material Consumed	36.00	42.84	49.94	57.30	64.94
Electricity Expenses	1.68	1.96	2.24	2.52	2.80
Repair & Maintenance	0.91	1.13	1.33	1.54	1.77
Labour & Wages	11.09	13.86	16.63	19.79	22.76
Depreciation	2.07	1.76	1.50	1.28	1.09
<b>Cost of Production</b>	<b>51.75</b>	<b>61.55</b>	<b>71.64</b>	<b>82.44</b>	<b>93.36</b>
<b>Add: Opening Stock /WIP</b>	<b>-</b>	<b>1.73</b>	<b>2.05</b>	<b>2.39</b>	<b>2.75</b>
<b>Less: Closing Stock /WIP</b>	<b>1.73</b>	<b>2.05</b>	<b>2.39</b>	<b>2.75</b>	<b>3.11</b>
Cost of Sales (B)	50.03	61.22	71.30	82.08	92.99
<b>C) GROSS PROFIT (A-B)</b>	<b>10.88</b>	<b>14.12</b>	<b>17.44</b>	<b>20.81</b>	<b>24.79</b>
	<b>17.86%</b>	<b>18.74%</b>	<b>19.65%</b>	<b>20.22%</b>	<b>21.05%</b>
D) Bank Interest i) (Term Loan )	1.37	1.12	0.81	0.50	0.19
ii) Interest On Working Capital	0.35	0.35	0.35	0.35	0.35
E) Salary to Staff	4.79	6.22	7.84	9.57	11.48
F) Selling & Adm Expenses Exp.	1.22	2.11	2.66	3.29	3.77
<b>G) TOTAL (D+E+F)</b>	<b>7.73</b>	<b>9.80</b>	<b>11.67</b>	<b>13.71</b>	<b>15.80</b>
<b>H) NET PROFIT</b>	<b>3.15</b>	<b>4.32</b>	<b>5.77</b>	<b>7.09</b>	<b>9.00</b>
	<b>5.2%</b>	<b>5.7%</b>	<b>6.5%</b>	<b>6.9%</b>	<b>7.6%</b>
I) Taxation	-	-	0.29	0.57	0.96
<b>J) PROFIT (After Tax)</b>	<b>3.15</b>	<b>4.32</b>	<b>5.48</b>	<b>6.53</b>	<b>8.03</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	1.76	-	-	-	-
Reserve & Surplus	3.15	4.32	5.77	7.09	9.00
Depreciation & Exp. W/off	2.07	1.76	1.50	1.28	1.09
Increase In Cash Credit	3.20	-	-	-	-
Increase In Term Loan	12.60	-	-	-	-
Increase in Creditors	1.80	0.34	0.35	0.37	0.38
<b>TOTAL :</b>	<b>24.58</b>	<b>6.42</b>	<b>7.63</b>	<b>8.74</b>	<b>10.47</b>
<b><u>APPLICATION OF FUND</u></b>					
Increase in Fixed Assets	14.00	-	-	-	-
Increase in Stock	2.93	1.27	0.69	0.73	0.75
Increase in Debtors	2.44	0.58	0.54	0.57	0.60
Repayment of Term Loan	1.40	2.80	2.80	2.80	2.80
Taxation	-	-	0.29	0.57	0.96
Drawings	2.50	2.80	3.40	4.00	5.00
<b>TOTAL :</b>	<b>23.26</b>	<b>7.45</b>	<b>7.72</b>	<b>8.66</b>	<b>10.10</b>
Opening Cash & Bank Balance	-	1.32	0.29	0.21	0.29
Add : Surplus	1.32	- 1.02	- 0.09	0.08	0.36
Closing Cash & Bank Balance	<b>1.32</b>	<b>0.29</b>	<b>0.21</b>	<b>0.29</b>	<b>0.65</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>					
(10 Days requirement)	1.73	2.05	2.39	2.75	3.11
<b><u>Raw Material</u></b>					
(10 Days requirement)	1.20	2.14	2.50	2.87	3.25
<b>Closing Stock</b>	<b>2.93</b>	<b>4.19</b>	<b>4.89</b>	<b>5.61</b>	<b>6.36</b>

**COMPUTATION OF WORKING CAPITAL REQUIREMENT**

<b>Particulars</b>	<b>Amount</b>	<b>Margin(10%)</b>	<b>Net Amount</b>
Stock in Hand	2.93		
Less:			
Sundry Creditors	1.80		
<b>Paid Stock</b>	<b>1.13</b>	<b>0.11</b>	<b>1.01</b>
Sundry Debtors	2.44	0.24	2.19
<b>Working Capital Requirement</b>			<b>3.20</b>
<b>Margin</b>			0.36
<b>MPBF</b>			<b>3.20</b>
<b>Working Capital Demand</b>			<b>3.20</b>

**REPAYMENT SCHEDULE OF TERM LOAN**

11.0%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
<b>I</b>	Opening Balance						
	Ist Quarter	-	12.60	12.60	0.35	-	12.60
	Iind Quarter	12.60	-	12.60	0.35	-	12.60
	IIIrd Quarter	12.60	-	12.60	0.35	0.70	11.90
	Ivth Quarter	11.90	-	11.90	0.33	0.70	11.20
					1.37	1.40	
<b>II</b>	Opening Balance						
	Ist Quarter	11.20	-	11.20	0.31	0.70	10.50
	Iind Quarter	10.50	-	10.50	0.29	0.70	9.80
	IIIrd Quarter	9.80	-	9.80	0.27	0.70	9.10
	Ivth Quarter	9.10		9.10	0.25	0.70	8.40
					1.12	2.80	
<b>III</b>	Opening Balance						
	Ist Quarter	8.40	-	8.40	0.23	0.70	7.70
	Iind Quarter	7.70	-	7.70	0.21	0.70	7.00
	IIIrd Quarter	7.00	-	7.00	0.19	0.70	6.30
	Ivth Quarter	6.30		6.30	0.17	0.70	5.60
					0.81	2.80	
<b>IV</b>	Opening Balance						
	Ist Quarter	5.60	-	5.60	0.15	0.70	4.90
	Iind Quarter	4.90	-	4.90	0.13	0.70	4.20
	IIIrd Quarter	4.20	-	4.20	0.12	0.70	3.50
	Ivth Quarter	3.50		3.50	0.10	0.70	2.80
					0.50	2.80	
<b>V</b>	Opening Balance						
	Ist Quarter	2.80	-	2.80	0.08	0.70	2.10
	Iind Quarter	2.10	-	2.10	0.06	0.70	1.40
	IIIrd Quarter	1.40	-	1.40	0.04	0.70	0.70
	Ivth Quarter	0.70		0.70	0.02	0.70	0.00
					0.19	2.80	

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>	5.22	6.08	6.98	7.81	9.12
Interest on Term Loan	1.37	1.12	0.81	0.50	0.19
Total	6.59	7.20	7.79	8.31	9.32
<b><u>REPAYMENT</u></b>					
Repayment of Term Loan	1.40	2.80	2.80	2.80	2.80
Interest on Term Loan	1.37	1.12	0.81	0.50	0.19
Total	2.77	3.92	3.61	3.30	2.99
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.38</b>	<b>1.84</b>	<b>2.16</b>	<b>2.52</b>	<b>3.11</b>
<b>AVERAGE D.S.C.R.</b>			<b>2.36</b>		

### **Assumptions:**

1. Production Capacity of Printer Ink Manufacturing unit is taken at 200 KG per day. First year, Capacity has been taken @ 30%.
2. Working shift of 10 hours per day has been considered.
3. Raw Material stock and Finished goods closing stock has been taken for 10 days.
4. Credit period to Sundry Debtors has been given for 12 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 25 HP.
10. Selling Prices & Raw material costing has been increased by 3% & 2% respectively in the subsequent years.

## **DISCLAIMER**

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