

P.P. FILES & FOLDER

1. INTRODUCTION

The advantages of PP files & folders are as follows:

Recycle, Soft, hence convenient to use, available in various colours,, long lasting, Eco-friendly, more durable, available in different colours, different finishes, elegant and moisture proof.

A PP file & folder is aesthetically better which befits the stature of a company. The PP file thickness varies between 0.18 mm to 1.25 mm.

A wide range of PP products apart from PP files such as presentation album or display books, ring binders and PP refillable note books, PP letter files, expansion cases for holding cheque books etc. business card holders, clear holders and sheet protectors, presentation folders and report covers, document action cases and system boxes are now available.

Printing on PP Files & Folders is done by screen printing and the ink used is indelible PVC ink. Printing on PP files is not as good as that on cardboard since the ink might fade due to moisture.

The shelf life of PP file is about 40 years, hence though costlier than a cardboard file is over all economical.

A PP file is more convenient to use i.e. can be folded.

2. MARKET POTENTIAL

PP file folders are now a days widely used in all Conferences/Seminars and offices to keep the document in a better condition and safe. These are available in various colours and appearance is good, therefore

preferred to a card board files. The consumption of IP Sheet during 2004-05 was 7 KT, which is likely to increase to 22 KT by 2010-11, as projected by working group on Petrochemicals, Min. of Chemicals & Fertilizers./ Two layer PP sheet upto 0.15 mm thickness is suitable for different types of stationery materials, which is rapidly gaining market acceptance in India.

3. BASIS & PRESUMPTIONS

- (i) The output capacity is taken as 120 Kgs/hr. The unit will work at 20 hrs. per day for 25 working days in a month and 300 days in a year. The output capacity may vary from machinery to machinery and the cost of machinery may also vary from supplier to supplier.
- (ii) The time period for achieving the full envisaged capacity utilisation is six months
- (iii) The labour wages are as per the prevailing rates in the market
- (iv) The rate of interest for fixed and working capital is taken as 12 per cent
- (v) The margin money requirement for this project is 30 per cent
- (vi) The pay back period of this project is 5 years
- (vii) The rate of land is taken @ Rs. 500/-per sq. mtr. and construction charges are taken @ Rs. 3500 per sq. mtr. This may also vary from place to place.
- (viii) The present profile has to be updated taking into prevailing cost of land, building, machinery etc. at the time of implementation of the project

4. IMPLEMENTATION SCHEDULE

The Time requirement for preparation of Project report : Two months

Time requirement for selection of Site : One month

Time required for registration as Small Scale Unit	:	One
Week		
Time required for acquiring the loan		
Machinery procurement, erection and commissioning	:	Three months
Recruitment of labourer etc.	:	One month
Trial runs	:	One month

5. **TECHNICAL ASPECT**

MANUFACTURING PROCESS

The extruder is often equipped with a gear pump to regulate output and control sheet thickness and quality, two crucial aspects of sheet production. The slot die, with the die lip opening set slightly greater than the desired sheet thickness, extrudes the melt at 200° C to 230° C, horizontally into a nip between two rolls of a three roll stack. A small bead of melt is usually built up in the first nip so that the surface of the sheet may be polished by the bottom roll prior to being cooled by the central roll. This action helps provide uniform thickness across the sheet and gives a smoother surface to the air side of the sheet. Except in very thick sheets, crystallisation is usually complete through the thickness before leaving the first cooling roll, and the second cooling roll is simply for the removal of additional heat. The sheet passes over a roller conveyor, which sometime will employ fans to measuring device, the sheet is cut and stacked, or wound into rolls. Mono and multilayer films upto 150 micro thickness are used to manufacture plain and embossed film rolls to make stationery files of different types. There lies tremendous opportunities considering the ever increasing demand for high value products of such kind.

Normally, 2 layer comprises of Homopolymer & Copolymer of PP having closer MFI values. The machine can also process very thin second layer

of material having higher sealing properties. By having this stationery products such as files, folders, box files, computer disk covers etc. can have better bonding between two meeting surfaces.

Sheet lines vary greatly in size, but most of the production occurs within a fairly narrow band, especially for PP Sheet thickness of 0.2 mm to 10 mm are possible, but anything over 6 mm is unusual. Most of the production is near 1 mm which is also the point below which the sheet is rolled and over which it is cut and stacked.

6. QUALITY & STANDARD

As per customer's specification.

7. PRODUCTION CAPACITY (Per Annum)

- (a) Quantity (M.T.) : 720
- (b) Value (Rs.) : 6,98,40,000.00

8. TOTAL POWER REQUIREMENT

Total connected load (KW) : 200

9. POLLUTION CONTROL MEASURES

The unit does not create any pollution. However, a proper ventilation should be made in the processing area for the better circulation of the fresh air.

10. ENERGY CONSERVATION

Entrepreneurs may select energy efficient machinery and proper planning has also to be made for saving energy in the unit.

11. FINANCIAL ASPECT

A. FIXED CAPITAL

i) <u>LAND & BUILDING:</u> (Rs.)	Area sq. mtrs.	Rate	Rs. per Sq. mtr.
Land	300	500	1,50,000.00
Building	100		3500
3,50,000.00			

Total : 5,00,000.00

ii) MACHINERY & EQUIPMENT:

(Rs.)	<u>Sr. No.</u>	<u>Description of machines</u>	<u>Qty.(Nos.)</u>
	(a)	Production Unit	
	i)	Extrusion Machine Cap. 120 Kgs./hr.	
		1,00,00,000.00	
	ii)	Cooling Tower	
		2,00,000.00	
	iii)	Scrap Grinder	
		1,00,000.00	
	iv)	Screen Printing Machine	
		1,50,000.00	
	v)	Compressor	1,00,000.00
	(b)	Testing Equipment & Other Accessories	
		50,000.00	
	(c)	Electrification & Installation @ 10% of cost & machinery (a) & (b)	
		10,50,000.00	
	(d)	Pre-operative expenses	
		50,000.00	
		Total cost of machinery & equipment (a to d)	
		1,16,00,000.00	

(e) Cost of Moulds & Dies

2,00,000.00

(f) Cost of Office Equipment/Furniture/Computers etc.

3,00,000.00

Total: -----
1,16,00,000.00

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Fixed Capital = (i) + (ii) = 5,00,000.00 + 1,16,00,000.00
= 1,21,00,000.00

B. WORKING CAPITAL

i) Staff and Labour (Per Month)

Designation (Rs.)	Nos.	Salary (Rs.)	
Production Engineer/Manager	01	10,000.00	10,000.00
Sales Executive	01	5,000.00	5,000.00
Accountant-cum-Store Keeper	01	4,000.00	4,000.00
Watchman	02	3,000.00	6,000.00
Skilled Workers	02	3,500.00	7,000.00
Helpers	03	3,000.00	9,000.00
			----- 41,000.00

Add perquisite @ 10% of the Salary
4,100.00

Total: -----
45,100.00

Or Say Rs. 45,000.00

ii) Raw Material (Per Month) Qty. (M.T.) Rate Rs./M.T
(Rs.)

Polypropylene Granules	60	75,000
45,00,000.00		

iii) <u>Utilities</u> (per month):		(Rs.)
a) Power		3,00,000.00
(60% utilisation x 200 KW x 500 hrs. x Rs. 5 per unit)		
b) Water		--
1,000.00		

	Total:	3,01,000.00

iv) <u>Other Contingent Expenses</u> (Per month)		(Rs.)
jjj) Repairs and Maintenance		
1,000.00		
b) Transportation Charges		4,000.00
c) Postage and stationery		1,000.00
d) Telephone/Fax/Computer		
2,000.00		
e) Consumable Stores		
1,000.00		
f) Advertisement & Publicity		
1,000.00		
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g) Insurance		10,000.00
h) Miscellaneous Expenses		
1,000.00		

	Total:	21,000.00

12. <u>TOTAL WORKING CAPITAL</u> (Per Month)		(Rs.)
i) Staff and Labour		45,000.00

ii) Raw Material	
45,00,000.00	
iii) Utilities	3,01,000.00
iv) Other Contingent Exp.	21,000.00
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	Total: 48,67,000.00

Working Capital for 3 months	1,46,01,000.00

13. TOTAL CAPITAL INVESTMENT
(Rs.)

A. Fixed Capital	
1,21,00,000.00	
B. Working Capital for 3 months	
1,46,01,000.00	

	Total: 2,67,01,000.00

14. FIANCIAL ANALYSIS

(Rs.)

A. Cost of Production (per year) (300 days)	
(a) Total Recurring Cost	
5,84,04,000.00	
(b) Depreciation on building @ 5%	
17,500.00	
(c) Depreciation on machinery & equipment @ 10%	
11,60,000.00	
(d) Depreciation on Dies, Moulds & office equipment	
1,00,000.00	
@ 20%	
(f) Interest on total Capital Investment @ 12%	
32,04,120.00	

	Total: 6,28,85,620.00

	Or Say Rs.
6,28,86,000.00	

B. Sales/Turn over (per year)

<u>Item</u>	<u>Qty.(MT)</u>	<u>Rate (MT)</u>	<u>Value (Rs.)</u>
P.P. Files & Folders	720		97,000
			6,98,40,000.00

C. Net Profit (Per year)

Sales(Rs)	–	Cost of Production (Rs.)	=	Profit
(Rs.)				
6,98,40,000	-	6,28,86,000	=	
69,54,000.00				

D. Net Profit Ratio = $\frac{\text{Net Profit} \times 100}{\text{Sales}}$

= $\frac{69,54,000 \times 100}{6,98,40,000}$ = 9.95 %

E. Rate of Return = $\frac{\text{Net Profit} \times 100}{\text{Total Capital Investment}}$

= $\frac{69,54,000 \times 100}{2,67,01,000}$ = 26.0 %

F. Break-even Point

Fixed Cost (Per Year) (Rs.)

a) Depreciation on Building @ 5%

17,500.00

b) Depreciation on Machinery & Equipment @ 10%

11,60,500.00

c) Depreciation on Moulds/Dies & Office Equipment

1,00,000.00

@ 20%

d) Insurance 1,20,000.00

e) Interest on total capital investment

32,04,120.00

f) 40% of salary and wages

2,16,000.00

g) 40% of other contingent expenses

52,800.00

Total: -----
48,70,420.00

Net Profit (Per Year)

Or Say Rs. 48,70,000.00

$$\begin{aligned} \text{B.E.P. \%} &= \frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Net Profit}} \\ &= \frac{48,70,000 \times 100}{48,70,000 + 69,54,000} \\ &= \frac{48,70,000 \times 100}{1,18,24,000} \\ &= 41.18 \% \end{aligned}$$

P.P. PAINT CONTAINERS – HALF LTR. TO 20 LTRS.

1. INTRODUCTION

Paint containers are the packaging medium used for storage, handling and distribution of paints. It consists of a container, lit and a handle, which are made from Polypropylene (PP) & High Density Polyethylene (HDPE). However, this profiles is based on Polypropylene. These are made by injection moulding process, giving a single piece seamless bottom and pilfer proof design. Generally P.P. Copolymer (PPCP) is used for paint containers. It offers many advantages over conventional tin containers like light weight, good aesthetic appeal, better stackability, rust and dent free, scratch proof, reusability, sturdy handles etc.

resulting in a better performance and the best shelf appeal to the customer.

The plastic containers are usually produced in the range of ½ ltr. to 20 ltrs. Type of closures vary depending upon size of article and mould design but can be plug type or positive seal. The walls of containers are non-tapered and hence it is easy to wrap a label or have direct printing.

2. MARKET POTENTIAL

The total installed capacity of paint containers in the country is more than 1000 tons P.A. Hence there is good requirement for Plastic Containers, which are replacing the traditional metal containers. With the increase in population and rise in standard of living, the demand for residential and office accommodation is rising in future, there will be good demand for the paints, which will be packed in the plastic containers.

3. BASIS & PRESUMPTIONS

- (i) The output capacity is taken as 100 Kgs/hr. The unit will work at 20 hrs. per day for 25 working days in a month and 300 days in a year. The output capacity may vary from machinery to machinery and the cost of machinery may also vary from supplier to supplier.
- (ii) The time period for achieving the full envisaged capacity utilisation is six months
- (iii) The labour wages are as per the prevailing rates in the market
- (iv) The rate of interest for fixed and working capital is taken as 12 per cent
- (v) The margin money requirement for this project is 30 per cent
- (vi) The pay back period of this project is 5 years

(vii) The rate of land is taken @ Rs. 500/-per sq. mtr. and construction charges are taken @ Rs. 3500 per sq. mtr. This may also vary from place to place.

(viii) The present profile has to be updated taking into prevailing cost of land, building, machinery etc. at the time of implementation of the project

4. IMPLEMENTATION SCHEDULE

The Time requirement for preparation of Project report : Two months

Time requirement for selection of Site : One month

Time required for registration as Small Scale Unit : One Week

Time required for acquiring the loan Machinery procurement, erection and commissioning : Three months

Recruitment of labourer etc. : One month

Trial runs : One month

5. TECHNICAL ASPECT

MANUFACTURING PROCESS

The containers are manufactured by the usual injection moulding process. Raw materials are fed in the injection moulding machine, where it is plasticized and then injected into the special mould of the container. Product is allowed to cool within mould and then ejected. The real expertise lies in the post forming operation, which is performed on the container. There is a curing time of 45 minutes between moulding and post forming stage, which is carried out in cold operation. Firstly the edges of the containers are folded in wards. In the sizing the outside diameter (OD) of the container is sized upto the final diameter required by using tapered Teflon bush alongwith the vacuum pressure. The sizing

OD is always a few mm less than the final OD required as there is some spring back in the OD after sizing is done. Spring back varies for different raw materials and also with climate. Handle holes are punched on the container for handle. Then these are stored for 24 hours. Heat treatment is given on the surface of the

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container by using LPG gas then to prepare for printing. Printing is then done by screen printing process for 3 colours and if four colours required it can be done by dry off set printing. Various tests are also carried out before selling.

6. QUALITY & STANDARD

Paint Containers can be manufactured as per IS : 2798 : 1964 & 1992 or as per customers' specification

7. PRODUCTION CAPACITY (Per Annum)

- (a) Quantity (M.T.) : 600
- (b) Value (Rs.) : 6,30,00,000.00

8. TOTAL POWER REQUIREMENT

Total connected load (KW) : 265

9. POLLUTION CONTROL MEASURES

The unit does not create any pollution. However, a proper ventilation should be made in the processing area for the better circulation of the fresh air.

10. ENERGY CONSERVATION

Entrepreneurs may select energy efficient machinery and proper planning has also to be made for saving energy in the unit.

11. FINANCIAL ASPECT

A. FIXED CAPITAL

i) <u>LAND & BUILDING:</u> (Rs.)	Area sq. mtrs.	Rate	Rs. per Sq. mtr.
Land	500	300	1,50,000.00
Building	100	3500	
3,50,000.00			
		Total :	-----
5,00,000.00			-----

ii) MACHINERY & EQUIPMENT:

(Rs.)	<u>Sr. No.</u>	<u>Description of machines</u>	<u>Qty. (Nos.)</u>
	(a)	Production Unit	
	i)	Injection Moulding Machine 180 M.T. Cap.	01
		40,00,000.00	
	ii)	Injection Moulding Machine 350 M.T. Cap.	01
		60,00,000.00	
	iii)	Chilling Plant	01
		4,00,000.00	
	iv)	Scrap Grinder	01
		1,00,000.00	
	v)	Moulding Lifting arrangement	01
		2,00,000.00	
	vi)	Compressor	01
		1,00,000.00	

(b) Testing Equipment & Other Accessories
2,00,000.00

(c) Electrification & Installation @ 10% of cost & machinery
11,00,000.00
(a) & (b)

(d) Pre-operative expenses
1,00,000.00

Total cost of machinery & equipment (a to d)
1,22,00,000.00

(e) Cost of Moulds & Dies
7,00,000.00

(f) Cost of Office Equipment/Furniture/Computers etc.
3,00,000.00

Total: 1,32,00,000.00

Fixed Capital (i) + (ii) = 15,00,000 + 1,32,00,000 =
1,37,00,000.00

B. WORKING CAPITAL

i) Staff and Labour (Per Month)

Designation	Nos.	Salary (Rs.)	(Rs.)
Production Engineer/Manager	01	12,000	
			12,000.00
Sales Executive	01	8,000	8,000.00
Accountant-cum-Store Keeper	01	5,000	
			5,000.00
Watchman	02	3,000	6,000.00
Skilled Workers	03	4,000	12,000.00
Helpers	03	3,000	9,000.00

52,000.00

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Add perquisite @ 10% of the Salary
5,200.00

Total: 57,200.00
Or Say 57,000.00

ii)	<u>Raw Material</u> (Per Month)	Qty. (Tones)	Rate Rs/kg.	(Rs.)
	P.P. Granules	50 M.T.	75,000	
37,50,000.00				

iii) Utilities (per month): (Rs.)

a) Power 3,97,500.00
(60% utilisation x 265 KW x 500 hrs. x Rs. 5 per unit)

b) Water
2,500.00

Total: 4,00,000.00

iv) Other Contingent Expenses (Per month)
(Rs.)

kkk) Repairs and Maintenance
2,000.00

lll) Transportation Charges 5,000.00

mmm) Postage and stationery
1,000.00

nnn) Telephone/Fax/Computer
2,000.00

ooo) Consumable Stores	
1,000.00	
ppp) Advertisement & Publicity	
3,000.00	
qqq) Insurance	10,000.00
rrr) Miscellaneous Expenses	
1,000.00	

Total: 25,000.00

12. TOTAL WORKING CAPITAL (Per Month) (Rs.)

i) Staff and Labour	57,000.00
ii) Raw Material	
37,50,000.00	
iii) Utilities	4,00,000.00
iv) Other Contingent Exp.	25,000.00

Total: 42,32,000.00

Working Capital for 3 months 1,26,96,000.00

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13. TOTAL CAPITAL INVESTMENT (Rs.)

A. Fixed Capital	
1,37,00,000.00	B. Working Capital for 3 months
1,26,96,000.00	

Total: 2,63,96,000.00

14. FIANCIAL ANALYSIS (Rs.)

A. Cost of Production (per year) (300 days)

(a) Total Recurring Cost

5,07,84,000.00

(b) Depreciation on building @ 5%

17,500.00

(c) Depreciation on machinery & equipment @ 10%

12,20,000.00

(d) Depreciation on Dies, Moulds & Office equipment

2,80,000.00

@ 20%

(f) Interest on total Capital Investment @ 12%

31,67,520.00

Total: 5,53,89,020.00

Or Say Rs.

5,53,89,000.00

B. Sales/Turn over (per year)

<u>Item</u> (Rs.)	<u>Qty. (MT)</u>	<u>Rate (MT)</u>	alue
P.P. Paint containers 6,30,00,000.00 ½ Ltr. to 20 ltrs.	600	1,05,000.00	

C. Net Profit (Per year)

Sales(Rs)	–	Cost of Production (Rs.)	=	Profit (Rs.)
6,30,00,000	-	5,53,89,900	=	76,11,000.00

D. Net Profit Ratio = $\frac{\text{Net Profit} \times 100}{\text{Sales}}$
 = $\frac{76,11,000 \times 100}{6,30,00,000}$ = 12.1 %

E. Rate of Return = $\frac{\text{Net Profit} \times 100}{\text{Total Capital Investment}}$
 = $\frac{76,11,000 \times 100}{2,80,00,000}$ = 28.33 %

2,63,96,000

F. Break-even Point

Fixed Cost (Per Year) (Rs.)

a) Depreciation on Building @ 5%

17,500.00

b) Depreciation on Machinery & Equipment @ 10%

12,20,000.00

c) Depreciation on Moulds/Dies & Office Equipment

2,60,000.00

@ 20%

d) Insurance

1,00,000.00

e) Interest on total capital investment

31,67,500.00

f) 40% of salary and wages

2,73,600.00

g) 40% of other contingent expenses

72,000.00

Total: 51,10,620.00

Or say Rs. 51,11,000.00

Net Profit (Per Year)

$$\text{B.E.P. \%} = \frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Net Profit}}$$

$$= \frac{51,11,000 \times 100}{51,11,000 + 76,11,000}$$

$$= \frac{51,11,000 \times 100}{1,27,22,000}$$

$$= 40.17 \%$$