

PROJECT PROFILE

ON

PET BOTTLES

PREPARED BY



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1. Introduction:

PET Bottles are used to packing of Edible oils, jams and sauces, Butter, syrups, Drinking water etc having the capacity from 500ml to 2 liters. PET resin are extruded and converted to pre-forms and later molding is done to make the PET Bottles by using the pre-forms.

Major application areas of PET bottles are carbonated soft drinks, Mineral water packing, Syrups, Edible oil packing, Butter and Mayonnaise, Wine, Liquor and spirit packing, Sauce, jam and squashes packaging, Agro chemical packaging and house hold containers

2. Market:

Pet bottles are replacing glass bottles because of the high rate of breakage and the inconvenience of returning the empty bottle after consumption.

The consumption pattern is tending to converge with the international patterns and this is how new categories such as sports drinks, juices and non-returnable (PET bottles and cans) are catching up in the local market.

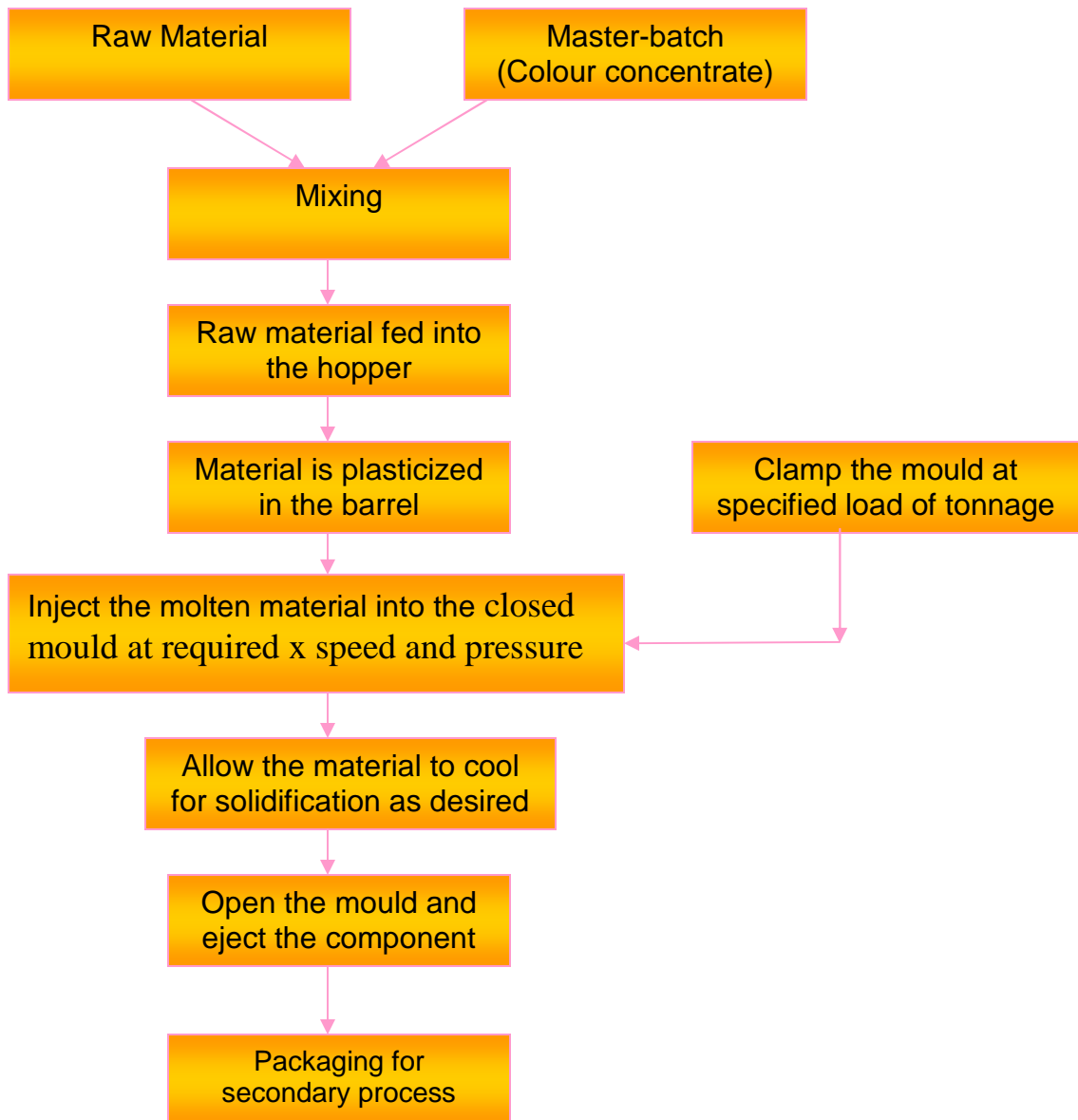
3. Raw Material:

The raw material used in manufacturing of PET Bottles/ Preforms is Polyethylene Teraphthalate. Polyethylene tetra phthalate is a polymer that is formed by combining two monomers called modified ethylene glycol and purified teraphthalic acid

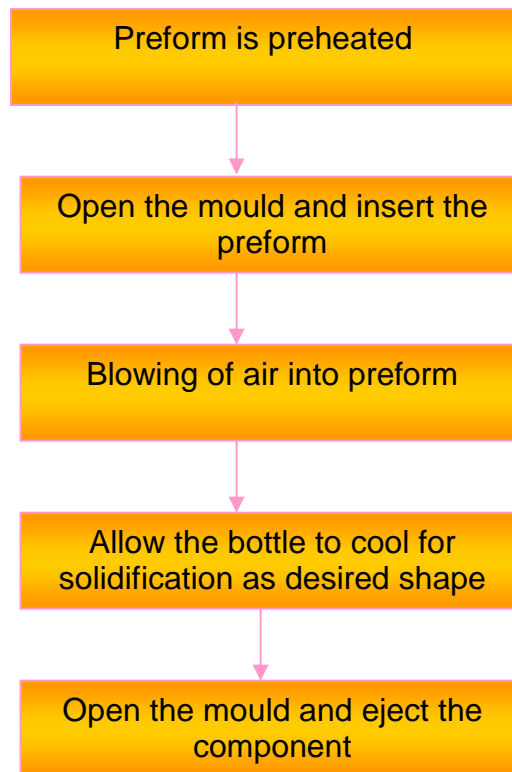
4. Manufacturing Process & Technology

Production of PET Preforms and PET Bottles involves the conversion of PET Granules to Preforms and later converting to PET Bottles through moulding process. The step wise production process is explained in the following process flow diagram:

Injection Moulding Process



Blowing Process



5. Technology:

The technology/Machinery required for manufacturing of the Pet Bottles are three Nos. of Injection Molding Machines, one Color mixer, one Chilling Water plant, a Scrap Grinder and a Centralized Pulley laminating and printing machine.

6. Investment:

The investment for setting up a Pet Bottles manufacturing Plant works out to **Rs. 2.52 Crores** and the break up of the cost is tabulated below.

The land requirement will be around 2.0 acres. The Preliminary & Pre-operative expense works out to Rs 0.18 crores. Plant & Machinery including installation, erecting & transportation charges are of 0.60 Crores. Buildings and civil works are estimated to be 1.04 Crores. Contingencies @ 5%, Misc. Fixed Assets and Electricity Deposits have been considered in the project cost. Margin money for working capital is estimated to be 0.11 Crores.

Table 1: Project Cost

S.No.	Description	Cost (Rs in Crores)
1	Land & Site Development	0.20
2	Buildings & Civil works	1.04
3	Plant & Machinery including ert., ins.,& trans	0.60
4	Misc. Fixed Assets	0.20
5	Contingency @5%	0.09
6	Electricity Deposits	0.10
7	Preliminary & Pre-operative Expenses	0.18
8	Margin Money for Working capital	0.11
Total Project Cost		2.52

Means of Finance

The project is proposed to finance with a debt equity ratio of 2.27:1 and the means of finance is as follows:

Table 2: Means of Finance

S.No.	Sources of Funds	Cost (Rs in Crores)
1	Share Capital - Equity	0.77
2	Term Loan	1.75
	Total	2.58

7. Profitability Assumptions:

Basic assumptions of the Pet Bottle manufacturing unit are given in the table below:

- The installed capacity is considered as below:
 - 2 Ltrs: 432 Bottles/Hr
 - 1 Ltr: 432 Bottles/Hr
 - 500 ml: 432 Bottles/Hr
- No. of Working days is considered at 300 with 2 operating shifts per day and 8 hours/shift
- The unit can work at 60% capacity for the first year and can increase by 3-4% there on.
- The manpower requirement is considered at 29 personnel for various level viz. casual labour, Technical & Supervisory staff and administrative staff.

8. Key Financial indicators:

The returns are adequate enough to repay the term loan in 5 years. The key financial indicators are tabulated below.

(Rs. in Crores)

S No	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
1	Sales	4.60	4.83	5.06	5.29	5.52
2	Total Expenditure	2.87	3.01	3.15	3.29	3.44
3	PBIDT	1.73	1.82	1.91	2.00	2.09
4	PBT	1.40	1.53	1.67	1.81	1.95
5	PAT	0.89	0.99	1.08	1.17	1.26
6	Cash Accruals	0.97	1.07	1.16	1.25	1.34
7	BEP @ Operating capacity	33.79%	30.71%	27.93%	25.39%	23.13%
8	Debt Equity Ratio	1.82	1.36	0.91	0.45	0.00
9	DSCR (Gross)	2.13	2.41	2.75	3.18	3.69
10	Average DSCR	2.75				
11	DSCR (Net)	2.86	3.12	3.38	3.64	3.90
12	Average DSCR	3.38				
13	IRR (%)	49.03%				
