

HDPE LUBE OIL CONTAINER 5 LTR. CAP.

1. INTRODUCTION

HDPE Containers have emerged as the primary and dominant choice for packaging of the lube oil due to its unique properties. HDPE containers are preferred because of its light weight, good impact strength, ease to handle during transportation, lower rejection as compared to tin containers because of its superior resistance. HDPE Containers are made first and printed later on, which has the advantage in terms of change over of prints as compared to tin containers, where the sheet is first printed and then fabricated into containers.

2. MARKET POTENTIAL

The consumption of lube oil is linked with the growth in the road transport and level of industrial growth. The lube market has been growing at the rate of 8% in the past. The future growth for lube oil is expected to be between 8 to 12% per annum. The demand for HDPE Blow Moulded articles in India is projected at 523 KT by 2010. India has a market of 850 KTA of finished lubricating oil, valued at about Rs. 4,500 Crores, out of this, around 80% contributes to the automotive market. The over all market is expected to grow at the rate of around 4% every year due to the increase in automobiles in market. The entire market was divided among seven players and 91% of the market was covered by Govt. owned oil companies (IOC, HPCL, BPCL & IBP) and the remaining 9% was shared by three private oil companies (Castrol, Gulf & Tidewater). In the unorganised sector, it is estimated a market of around 20 KTA, which are basically refineries. Due to the Liberalisation Programme of the Government, various Transnational Oil Companies are also likely to enter in the Indian market, like IOC – Mobile, BPCL – Shell, IBP – Caltex and Tide Water – Mitsubishis.

3. BASIS & PRESUMPTIONS

- (i) The output capacity is taken as 25 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

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- (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

In a typical Extrusion Blow Moulding process, plastics granules are fed into the hopper of the extruder. These granules travel to the extruder barrel, whereby the granules are heated with the help of electric heaters and homogenised by the screw in the barrel. The plasticized mass is extruded into the tube called parison. The Parison is then inflated into a mould of required form to contact and set up against the cooled walls of the mould cavity. The following properties of the end product must be ensured during manufacturing:

Uniform Wall thickness

Consistency in weight of moulded product

Uniform colour dispersion throughout article specified dimensional accuracy

6. QUALITY & STANDARD

The containers may be manufactured as per the standard specification specified by the Oil Companies. The item can also be manufactured as per IS 7394.

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7. PRODUCTION CAPACITY (Per Annum)

- | | | |
|---------------------|---|----------------|
| (a) Quantity (M.T.) | : | 150 |
| (b) Value (Rs.) | : | 1,50,00,000.00 |

8. TOTAL POWER REQUIREMENT

Total connected load (HP/KW) : 55 KW

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 ASPECTS

A. FIXED CAPITAL

i) LAND & BUILDING Area sq. mtrs. Rate Rs. per Sq. mtr. (Rs.)

Land	120	500.00	60,000.00
Building	60.	3500.00	2,10,000.00

		Total :	2,70,000.00

ii) MACHINERY & EQUIPMENT

(Rs.)	Sr. No.	Description of machines	Qty.(Nos.)
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(c) Production Unit

1. Extrusion Blow Moulding Machine	1 No.
10,00,000.00 - 5 ltr. Capacity with all accessories alongwith compressor and cooling tower	

2. Scrap Grinder	1 No.
75,000.00	

(d) Testing Equipment & Other Accessories

50,000.00

(c) Electrification & Installation @ 10% of cost & machinery

1,13,000.00

(a) & (b)

(d) Pre-operative expenses
50,000.00

Total cost of machinery & equipment (a to d)
12,88,000.00

(e) Cost of Moulds & Dies
75,000.00

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

Total: 16,63,000.00

Fixed Capital - (i) + (ii) = Rs. 2,70,000 + Rs. 16,63,000 =
19,33,000.00

B. WORKING CAPITAL

i) Staff and Labour (Per month)

Designation (Rs.)	Nos.	Salary (Rs.)	
Sales Executive	1	5,000.00	5,000.00
Accountant-cum-Store Keeper	1	4,000.00	
4,000.00			
Watchman	2	3,000.00	6,000.00
Skilled Workers	3	3,500.00	10,500.00
Helpers	3	3,000.00	9,000.00

		Total:	34,500.00
Add perquisite @ 10% of the Salary			
3,450.00			-----
		Total:	
37,950.00			-----

Or say Rs.

38,000.00

(Rs.)	ii) <u>Raw Material</u> (Per month) Qty. (M.T.)	Rate Rs./ M.T.	
	HDPE Granules	12.5	75,000
			9,37,500.00
	iii) <u>Utilities</u> (per month):		(Rs.)
	a) Power (60% utilisation of the total load x 55 KW x 500 hrs. x Rs. 5 per unit)		
			82,500.00
500.00	b) Water		
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		Total:	83,000.00

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	iv) <u>Other Contingent Expenses</u> (Per month)	(Rs.)
	y) Repairs and Maintenance	
	1,000.00	
	z) Transportation Charges	5,000.00
	aa) Postage and stationery	1,000.00
	bb) Telephone/Fax/Computer	
	2,000.00	
	cc) Consumable Stores	
	1,000.00	
	dd) Advertisement & Publicity	
	1,500.00	
	ee) Insurance	2,500.00
	ff) Miscellaneous Expenses	
	1,000.00	

	Total:	15,000.00

12. <u>TOTAL WORKING CAPITAL</u> (Per month)	----- (Rs.)
i) Staff and Labour	38,000.00
ii) Raw Material	
9,37,500.00	
iii) Utilities	83,000.00
iv) Other Contingent Exp.	15,000.00

Total:	10,73,500.00

Or say	
10,74,000.00	
Working Capital for 3 months	32,22,000.00

13. TOTAL CAPITAL INVESTMENT
(Rs.)

A. Fixed Capital	
19,33,000.00	B. Working Capital for 3 months
32,22,000.00	

	Total: 51,55,000.00

14. FIANCIAL ANALYSIS

A. Cost of Production (per year)	(Rs.)
a) Total Recurring Cost	
1,28,88,000.00	
b) Depreciation on building @ 5%	
10,500.00	
c) Depreciation on machinery& equipment @ 10%	
1,28,800.00	

d) Depreciation on Dies, Moulds & office equipment @
20%75,000.00

e) Interest on total Capital Investment @ 12%
6,18,600.00

Total: 1,37,20,900.00

Or say 1,37,21,000.00

B. Sales/Turn over (per year)

Item	Qty.(MT)	Rate (MT)	(Rs.)
HDPE Lube Oil Containers 5 ltrs. Capacity	150	1,00,000	1,50,00,000.00

C. Net Profit (Per year)

Sales (Rs.) – (Rs.)	Cost of Production (Rs.)	=	Profit
1,50,000 12,79,000	1,37,21,000	=	

D. Net Profit Ratio = $\frac{\text{Net Profit} \times 100}{\text{Sales}}$
= $\frac{12,79,000 \times 100}{1,50,00,000}$ = 8.52 %

E. Rate of Return = $\frac{\text{Net Profit} \times 100}{\text{Total Capital Investment}}$
= $\frac{12,79,000 \times 100}{51,55,000}$ = 24.8 %

F. Break-even Point

Fixed Cost (Per Year)
(Rs.)

a) Depreciation on Building @ 5%
10,500.00

b)	Depreciation on Machinery & Equipment @ 10%	
	1,28,800.00	
c)	Depreciation on Moulds/Dies & Office Equipment @ 20%	
	75,000.00	
d)	Insurance	30,000.00
e)	Interest on total capital investment	
	6,18,600.00	
f)	40% of salary and wages	
	1,82,400.00	
g)	40% of other contingent expenses	
	60,000.00	-----

	Total:	11,05,300.00

	Or say Rs.	11,05,000.00

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Net Profit (Per Year)

$$\begin{aligned}
 \text{B.E.P. \%} &= \frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Net Profit}} \\
 &= \frac{11,05,000 \times 100}{11,05,000 + 12,79,000} \\
 &= \frac{11,05,000 \times 100}{23,84,000} \\
 &= 46.33\%
 \end{aligned}$$