

# PROJECT REPORT

Of

# HDPE BUCKETS

## PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **HDPE Buckets**.

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 : xxxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxxxx  
Pin: xxxxxxxx State: xxxxxxxxxx  
Mobile : xxxxxxxx
- 5 Product and By Product : **HDPE BUCKETS(5 Ltr-20 Ltr)**
- 6 Name of the project / business activity proposed : **HDPE BUCKETS MANUFACTURING UNIT**
- 7 Cost of Project : Rs.39.56 Lakhs
- 8 Means of Finance  
Term Loan Rs.30.6 Lakhs  
Own Capital Rs.3.96 Lakhs  
Working capital Rs.5 Lakhs
- 9 Debt Service Coverage Ratio : 2.29
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 30%
- 13 Employment : 8 Persons
- 14 Power Requirement : 30.00 HP
- 15 Major Raw materials : HDPE Granules, Colourant
- 16 Estimated Annual Sales Turnover (Max Capacity) : 199.36 Lakhs
- 17 Detailed Cost of Project & Means of Finance

**COST OF PROJECT**

(Rs. In Lakhs)

Particulars	Amount
Land	Own/Rented
Plant & Machinery	31.00
Furniture & Fixtures	3.00
Working Capital	5.56
<b>Total</b>	<b>39.56</b>

**MEANS OF FINANCE**

Particulars	Amount
Own Contribution	3.96
Working Capital(Finance)	5.00
Term Loan	30.60
<b>Total</b>	<b>39.56</b>

## **HDPE BUCKETS**

**Introduction:** Plastic Buckets have been used in Indian households for over 30 years in every strata of society. The traditional galvanised iron, aluminium and brass buckets have been to a great extent been replaced by HDPE moulded buckets. The important performance characteristics they provide include lightness, unbreakability, ease in handling, safety in use, resistance to boiling water and chemicals, colour variability to match environment and economical cost. The HDPE Buckets are available in the market ranging from 13.5 litres to 25 litres capacity. However, the bucket having 21 litre capacities is the most popular in the market.



**Market Potential:** In accordance with the Working Group Report on Petrochemicals, Ministry of Chemicals & Fertilizers, the demand of total HDPE Injection Moulded items including buckets in India is projected to be 1500 Kilo Tonnes by 2020-25 having growth rate @ 16%. However, the moulded buckets and mugs are fast moving items. The growth rate and demand is envisaged on an average 11 – 12 percent per annum.

**Raw material:** Major raw materials are as follows:

1. HDPE Granules
2. Colourant

**Machinery Requirement:** Major machinery and equipments are as follows:

<b>Description</b>	<b>Quantity</b>	<b>Rate</b>	<b>Value</b>
Injection Molding Machine	1	2200000	2200000
Compressor 5 Kg Pressure	1	50000	50000
Cooling Tower	1	350000	350000
Scrap Grinder	1	250000	250000
Dry colour mixer	1	200000	200000
Other equipments & hand tools	Ls		50000
<b>Total Amount</b>			<b>3100000</b>

**Manufacturing Process:** HDPE Buckets can be moulded on Ram type or Screw type preplasticiser machines. The latter is preferred. The process involves feeding the raw material to the machine through a hopper. The barrel is heated to melt the material, which is injected into the mould halves by the forward movement of the screws into the cavity. The mould cavity is cooled by passage of water at ambient or low temperature to freeze the molten material. The pressure of the screw is held for some time and then it retracts by screw rotation. At the end of the moulding and cooling cycle, the mould halves open and the moulded item is extracted manually or automatically. Thus the entire moulding cycle comprising injection, holding the injection pressure, cooling and the idle time for extracting the moulding is completed.

**Area:** The industrial setup requires space for Inventory, workshop or manufacturing area, space for power supply utilities and auxiliary like Generator setup. Also some of the area of building is required for office staff facilities, documentation, office furniture, etc. Thus, the approximate total area required for complete industrial setup is 1500 to 2000Sqft.

**Power Requirement:** The power consumption required to run all the machinery could be approximated as 30 Hp

**Manpower Requirement:** There are requirement of skilled machine operators to run the machine set. Experience quality engineers are required for desired quality control. Some helpers are also required to transfer the material from one work station to other. Office staffs are required to maintain the documentation. The approximate manpower required is 8 including 1 Supervisor, 1 Plant operator, 1 unskilled worker, 1 Helper and 1 Security guard. 3 Skilled worker including Accountant, Manager and Sales person.

**Bank Term Loan:** Rate of Interest is assumed to be at 11%

**Depreciation:** Depreciation has been calculated as per the Provisions of Income Tax Act, 1961

## **Approvals & Registration Requirement:**

Basic registration required in this project:

- GST Registration
- Udyog Aadhar Registration (Optional)
- Choice of a Brand Name of the product and secure the name with Trademark if require.
- NOC from State Pollution Control Board

## **Implementation Schedule:**

S No.	Activity	Time required
1.	Acquisition of premises	1-2 Months
2.	Procurement & installation of Plant & Machinery	1-2 Months
3.	Arrangement of Finance	1.5-2 Months
4.	Requirement of required Manpower	1 Month
5.	Commercial Trial Runs	1 Month
	Total time Required (some activities shall run concurrently)	5-6 Months

## **FINANCIALS**

<b>PROJECTED BALANCE SHEET</b>					
<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>SOURCES OF FUND</b>					
<b>Capital Account</b>					
Opening Balance	-	4.94	8.57	12.87	17.66
Add: Additions	3.96	-	-	-	-
Add: Net Profit	6.98	10.63	13.80	14.80	18.07
Less: Drawings	6.00	7.00	9.50	10.00	12.00
<b>Closing Balance</b>	<b>4.94</b>	<b>8.57</b>	<b>12.87</b>	<b>17.66</b>	<b>23.73</b>
CC Limit	5.00	5.00	5.00	5.00	5.00
Term Loan	27.20	20.40	13.60	6.80	-
Sundry Creditors	2.15	2.46	2.67	2.87	3.08
<b>TOTAL :</b>	<b>39.29</b>	<b>36.43</b>	<b>34.13</b>	<b>32.34</b>	<b>31.81</b>
<b>APPLICATION OF FUND</b>					
<b>Fixed Assets ( Gross)</b>	<b>34.00</b>	<b>34.00</b>	<b>34.00</b>	<b>34.00</b>	<b>34.00</b>
Gross Dep.	4.95	9.17	12.78	15.85	18.47
Net Fixed Assets	29.05	24.83	21.22	18.15	15.53
<b>Current Assets</b>					
Sundry Debtors	2.86	3.37	3.81	4.22	4.65
Stock in Hand	5.13	5.86	6.55	7.19	7.86
Cash and Bank	2.25	2.38	2.55	2.77	3.78
<b>TOTAL :</b>	<b>39.29</b>	<b>36.43</b>	<b>34.13</b>	<b>32.34</b>	<b>31.81</b>

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<b>PROJECTED PROFITABILITY STATEMENT</b>					
PARTICULARS	I	II	III	IV	V
<b>A) SALES</b>					
Gross Sale	122.50	144.32	163.38	181.01	199.36
<b>Total (A)</b>	<b>122.50</b>	<b>144.32</b>	<b>163.38</b>	<b>181.01</b>	<b>199.36</b>
<b>B) COST OF SALES</b>					
Raw Material Consumed	92.13	105.53	114.32	123.11	131.91
Electricity Expenses	2.51	2.74	2.97	3.20	3.42
Repair & Maintenance	1.84	2.31	4.90	7.24	7.97
Labour & Wages	6.30	6.93	8.32	9.98	11.98
Depreciation	4.95	4.22	3.60	3.07	2.62
<b>Cost of Production</b>	<b>107.72</b>	<b>121.73</b>	<b>134.11</b>	<b>146.60</b>	<b>157.90</b>
<b>Add: Opening Stock /WIP</b>	<b>-</b>	<b>3.59</b>	<b>4.10</b>	<b>4.64</b>	<b>5.14</b>
<b>Less: Closing Stock /WIP</b>	<b>3.59</b>	<b>4.10</b>	<b>4.64</b>	<b>5.14</b>	<b>5.66</b>
Cost of Sales (B)	104.13	121.22	133.57	146.10	157.38
<b>C) GROSS PROFIT (A-B)</b>	<b>18.36</b>	<b>23.10</b>	<b>29.81</b>	<b>34.90</b>	<b>41.97</b>
	<b>14.99%</b>	<b>16.01%</b>	<b>18.25%</b>	<b>19.28%</b>	<b>21.05%</b>
D) Bank Interest (Term Loan )	3.32	2.71	1.96	1.22	0.47
ii) Interest On Working Capital	0.55	0.55	0.55	0.55	0.55
E) Salary to Staff	4.28	5.14	6.17	7.40	8.88
F) Selling & Adm Expenses Exp.	2.45	2.89	4.90	7.24	7.97
<b>TOTAL (D+E)</b>	<b>10.60</b>	<b>11.29</b>	<b>13.58</b>	<b>16.41</b>	<b>17.88</b>
H) NET PROFIT	7.76	11.81	16.23	18.50	24.10
	<b>6.3%</b>	<b>8.2%</b>	<b>9.9%</b>	<b>10.2%</b>	<b>12.1%</b>
I) Taxation	0.78	1.18	2.43	3.70	6.02
J) PROFIT (After Tax)	6.98	10.63	13.80	14.80	18.07



<b>PROJECTED CASH FLOW STATEMENT</b>					
<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>SOURCES OF FUND</b>					
Own Contribution	3.96	-			
Reserve & Surplus	7.76	11.81	16.23	18.50	24.10
Depriciation & Exp. W/off	4.95	4.22	3.60	3.07	2.62
Increase In Cash Credit	5.00				
Increase In Term Loan	30.60	-	-	-	-
Increase in Creditors	2.15	0.31	0.21	0.21	0.21
<b>TOTAL :</b>	<b>54.41</b>	<b>16.35</b>	<b>20.04</b>	<b>21.78</b>	<b>26.93</b>
<b>APPLICATION OF FUND</b>					
Increase in Fixed Assets	34.00	-	-	-	-
Increase in Stock	5.13	0.73	0.69	0.65	0.67
Increase in Debtors	2.86	0.51	0.44	0.41	0.43
Repayment of Term Loan	3.40	6.80	6.80	6.80	6.80
Taxation	0.78	1.18	2.43	3.70	6.02
Drawings	6.00	7.00	9.50	10.00	12.00
<b>TOTAL :</b>	<b>52.16</b>	<b>16.22</b>	<b>19.87</b>	<b>21.56</b>	<b>25.92</b>
Opening Cash & Bank Balance	-	2.25	2.38	2.55	2.77
Add : Surplus	2.25	0.12	0.17	0.22	1.01
Closing Cash & Bank Balance	<b>2.25</b>	<b>2.38</b>	<b>2.55</b>	<b>2.77</b>	<b>3.78</b>

<b>COMPUTATION OF MAKING OF HDPE BUCKETS</b>			
<b>Item to be Manufactured HDPE Buckets</b>			
Manufacturing Capacity per day		1,200	No.s
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		3,60,000	No.s
Total Production per Annum		3,60,000	No.s
Year		Capacity	HDPE BUCKETS(5)
		Utilisation	
I		55%	1,98,000.00
II		60%	2,16,000.00
III		65%	2,34,000.00
IV		70%	2,52,000.00
V		75%	2,70,000.00

**COMPUTATION OF RAW MATERIAL**

Item Name	Quantity of	Unit	Unit Rate of	Total CostPer Annum
HDPE Granules	250.00	MT	65,000.00	1,62,50,000.00
Colourant	Lusmum			5,00,000.00
<b>Total</b>				<b>1,67,50,000.00</b>
Total Raw material in Rs lacs				167.50

Raw Material Consumed	Capacity Utilisation	Amount (Rs.)	
I	55%	92.13	
II	60%	105.53	5% Increase in Cost
III	65%	114.32	5% Increase in Cost
IV	70%	123.11	5% Increase in Cost
V	75%	131.91	5% Increase in Cost

<b>COMPUTATION OF SALE</b>					
Particulars	I	II	III	IV	V
Op Stock	-	6,600.00	7,200.00	7,800.00	8,400.00
Production	1,98,000.00	2,16,000.00	2,34,000.00	2,52,000.00	2,70,000.00
	1,98,000.00	2,22,600.00	2,41,200.00	2,59,800.00	2,78,400.00
Less : Closing Stock(10 Days)	6,600.00	7,200.00	7,800.00	8,400.00	9,000.00
Net Sale	1,91,400.00	2,15,400.00	2,33,400.00	2,51,400.00	2,69,400.00
Sale Price per Pc	64.00	67.00	70.00	72.00	74.00
<b>Sale (in Lacs)</b>	<b>122.50</b>	<b>144.32</b>	<b>163.38</b>	<b>181.01</b>	<b>199.36</b>

<b>COMPUTATION OF CLOSING STOCK &amp; WORKING CAPITAL</b>					
<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>Finished Goods</b>					
(10 Days requirement)	3.59	4.10	4.64	5.14	5.66
<b>Raw Material</b>					
(5 Days requirement)	1.54	1.76	1.91	2.05	2.20
<b>Closing Stock</b>	<b>5.13</b>	<b>5.86</b>	<b>6.55</b>	<b>7.19</b>	<b>7.86</b>

<b>COMPUTATION OF WORKING CAPITAL REQUIREMENT</b>			
<b>Particulars</b>	<b>Amount</b>	<b>Margin(10%)</b>	<b>Net Amount</b>
Stock in Hand	5.13		
Less:			
Sundry Creditors	2.15		
<b>Paid Stock</b>	<b>2.98</b>	<b>0.30</b>	<b>2.68</b>
Sundry Debtors	2.86	0.29	2.57
<b>Working Capital Requirement</b>			<b>5.25</b>
<b>Margin</b>			0.58
<b>MPBF</b>			<b>5.25</b>
<b>Working Capital Demand</b>			<b>5.00</b>

<b>BREAK UP OF LABOUR</b>				
Particulars	Wages Per Month	No of Employees	Total Salary	
Supervisor	14,000.00	1	14,000.00	
Plant Operator	12,000.00	1	12,000.00	
Unskilled Worker	10,000.00	1	10,000.00	
Helper	8,000.00	1	8,000.00	
Security Guard	6,000.00	1	6,000.00	
			50,000.00	
Add: 5% Fringe Benefit			2,500.00	
Total Labour Cost Per Month			52,500.00	
Total Labour Cost for the year ( In Rs. Lakhs)		5	6.30	

<b>BREAK UP OF SALARY</b>				
Particulars	Salary Per Month	No of Employees	Total Salary	
Manager	14,000.00	1	12,000.00	
Accountant cum store keeper	12,000.00	1	12,000.00	
Sales	10,000.00	1	10,000.00	
Total Salary Per Month			34,000.00	
Add: 5% Fringe Benefit			1,700.00	
Total Salary for the month			35,700.00	
Total Salary for the year ( In Rs. Lakhs)		3	4.28	

<b>COMPUTATION OF DEPRECIATION</b>				
Description	Land	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		<b>15.00%</b>	<b>10.00%</b>	
<b>Opening Balance</b>	Leased	-	-	-
Addition	-	31.00	3.00	34.00
	-	31.00	3.00	34.00
		-	-	
TOTAL		31.00	3.00	34.00
Less : Depreciation	-	4.65	0.30	4.95
WDV at end of Ist year	-	26.35	2.70	29.05
Additions During The Year	-	-	-	-
	-	26.35	2.70	29.05
Less : Depreciation	-	3.95	0.27	4.22
WDV at end of IIInd Year	-	22.40	2.43	24.83
Additions During The Year	-	-	-	-
	-	22.40	2.43	24.83
Less : Depreciation	-	3.36	0.24	3.60
WDV at end of IIIrd year	-	19.04	2.19	21.22
Additions During The Year	-	-	-	-
	-	19.04	2.19	21.22
Less : Depreciation	-	2.86	0.22	3.07
WDV at end of IV year	-	16.18	1.97	18.15
Additions During The Year	-	-	-	-
	-	16.18	1.97	18.15
Less : Depreciation	-	2.43	0.20	2.62
WDV at end of Vth year	-	13.75	1.77	15.53

<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	-	30.60	30.60	0.84	-	30.60
	IInd Quarter	30.60	-	30.60	0.84	-	30.60
	IIIrd Quarter	30.60	-	30.60	0.84	1.70	28.90
	Ivth Quarter	28.90	-	28.90	0.79	1.70	27.20
					3.32	3.40	
<b>II</b>	Opening Balance						
	Ist Quarter	27.20	-	27.20	0.75	1.70	25.50
	IInd Quarter	25.50	-	25.50	0.70	1.70	23.80
	IIIrd Quarter	23.80	-	23.80	0.65	1.70	22.10
	Ivth Quarter	22.10		22.10	0.61	1.70	20.40
					2.71	6.80	
<b>III</b>	Opening Balance						
	Ist Quarter	20.40	-	20.40	0.56	1.70	18.70
	IInd Quarter	18.70	-	18.70	0.51	1.70	17.00
	IIIrd Quarter	17.00	-	17.00	0.47	1.70	15.30
	Ivth Quarter	15.30		15.30	0.42	1.70	13.60
					1.96	6.80	
<b>IV</b>	Opening Balance						
	Ist Quarter	13.60	-	13.60	0.37	1.70	11.90
	IInd Quarter	11.90	-	11.90	0.33	1.70	10.20
	IIIrd Quarter	10.20	-	10.20	0.28	1.70	8.50
	Ivth Quarter	8.50		8.50	0.23	1.70	6.80
					1.22	6.80	
<b>V</b>	Opening Balance						
	Ist Quarter	6.80	-	6.80	0.19	1.70	5.10
	IInd Quarter	5.10	-	5.10	0.14	1.70	3.40
	IIIrd Quarter	3.40	-	3.40	0.09	1.70	1.70
	Ivth Quarter	1.70		1.70	0.05	1.70	0.00
					0.47	6.80	

Door to Door Period            60 Months  
Moratorium Period                6 Months  
Repayment Period                 54 Months

<b>CALCULATION OF D.S.C.R</b>					
<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>CASH ACCRUALS</b>	11.93	14.85	17.40	17.87	20.70
Interest on Term Loan	3.32	2.71	1.96	1.22	0.47
Total	15.25	17.57	19.36	19.09	21.16
<b>REPAYMENT</b>					
Repayment of Term Loan	3.40	6.80	6.80	6.80	6.80
Interest on Term Loan	3.32	2.71	1.96	1.22	0.47
Total	6.72	9.51	8.76	8.02	7.27
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.27</b>	<b>1.85</b>	<b>2.21</b>	<b>2.38</b>	<b>2.91</b>
<b>AVERAGE D.S.C.R.</b>			<b>2.29</b>		



<b>COMPUTATION OF ELECTRICITY</b>				
<b>(A) POWER CONNECTION</b>				
Total Working Hour per day		Hours	8	
Electric Load Required		HP	30	
Load Factor			0.7460	
Electricity Charges		per unit	7.50	
Total Working Days			300	
<b>Electricity Charges</b>				4,02,840.00
Add : Minimim Charges (@ 10%)				
<b>(B) DG set</b>				
No. of Working Days			300	days
No of Working Hours			0.3	Hour per day
Total no of Hour			90	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			720	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			0.47	
Add : Lube Cost @15%			0.07	
Total			<b>0.54</b>	
Total cost of Power & Fuel at 100%				4.57
Year		Capacity		Amount (in Lacs)
I		55%		2.51
II		60%		2.74
III		65%		2.97
IV		70%		3.20
V		75%		3.42

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