

DETERGENT POWDER & CAKE

1. INTRODUCTION

Washing materials are made from different types of natural and synthetic raw materials. Soaps derived from vegetable oils were used traditionally for centuries. However, shortage of vegetable oils, need for better cleaning material for variety of fabrics and to reduce the cost, synthetic cleaning materials came in big way in 1960s and till it dominates the market.

Detergent powder & cake have now become very popular in India due to better cleaning properties, reduce cost, ease of application and possibility of mass production. They are formulated using synthetic forming material (acid slurry), soda ash, fillers, etc. Moreover, detergents work well with hard water which is a problem in many parts of the country.

2. PRODUCTS AND ITS APPLICATION

Synthetic detergent in powder form is widely used in household cleaning of cloth and other articles. Detergent powder can be formulated to suit washing machine application. Detergent cake is marketed as detergent material in India due to century old practice of washing cloth using soap bar. It has somewhat different formulations than powder. However, main ingredients remain same. In cake form it is easy to use and transport.

Synthetic detergent is not only used as household cleaning material but also have industrial applications in textiles, pesticide industry as carriers, etc.

3. DESIRED QUALIFICATION FOR PROMOTER

The promoter may have experience in production & marketing of washing material. It is important to have strong distribution network in the city and rural areas. It is not necessary to have chemical background for the promoter as technical knowhow is easily available in the market.

4. INDUSTRY OUTLOOK/TREND

Domestic and industrial cleaning products market is growing day by day with increase in per capita income, product innovations by manufacturers, awareness amongst consumers and Government mission on 'Swachh Bharat'. The trend in the market is to replace natural vegetable oil based cleaning material with synthetic materials for better cleaning properties and reduced cost. Cleaning products market is growing at the rate of 5% per annum in India.

5. MARKET POTENTIAL AND MARKETING ISSUES, IF ANY

The detergent market in India consists of two major categories- the hand-wash and the machine-wash categories. Powder detergents and bar-detergent form a major portion of the hand-wash segment. However, in the machine-wash segment, the powder detergents and liquid detergents are the main types. Total market of synthetic detergents was valued at about Rs.150 billion as of 2015-16 with a compounded annual growth rate (CAGR) of 3%. Also, the hand-wash detergents have shown an impressive growth rate of 3.3% CAGR since 2010, which has contributed to the growth in the overall detergent market.

In India, mainly there are two types of players in washing material. One in the small & cottage scale making formulated detergent materials, heavy in weight, improper mixing of ingredients & low cost. Against this, there are big players having sprayed dried materials, light in weight, high in cost & uniformly distributed ingredients in the final

products. Same is the scenario in detergent cake. The market for synthetic detergent powder and cake is increasing day by day with increase in population, per capita income and awareness for cleanliness & hygiene. For new players, they may concentrate on the local market in the initial period and develop brand image.

6. RAW MATERIAL REQUIREMENTS

The main raw materials required for the manufacturing of detergent powder & cake are acid slurry, soda ash, soda bicarb, sodium tripolyphosphate, soap stone, sodium silicate, sodium sulphate, synthetic dye etc. All these raw materials are produced & available in major parts of India without any difficulty. The choice of raw material and formula may vary according to the market condition and affordability of the consumers.

7. MANUFACTURING PROCESS

For detergent powder, first of all powder raw materials are screened in the required quantity and mixed uniformly. After this, acid slurry with dye is slowly poured on the mixture and mixed in a ribbon blender. The machine is run for about 15 minutes and then material is taken out, screened if required and packed in plastic bag.

For the production of detergent cake, required powder raw materials are mixed and then acid slurry with water and dye is poured in a mixture and then extruded in the form of continuous bar and cut in the required size. Alternatively, to reduce the investment, individual bar can be stamped in a hand operative stamping machine. The cake is wrapped in a paper and sealed.

8. MANPOWER REQUIREMENT

For the production of Detergent Powder and cake following category of manpower will be required for day to day production. Annual wages are also worked out.

Manpower requirement

Sr.No.	Designation of Employees	Monthly Salary ₹	Number of employees required	Annual cost ₹ in lacs
1	Skilled Worker	7,000	5	4.20
2	Unskilled Worker	5,000	10	6.00
3	Production Manager	15,000	1	1.80
4	Supervisor	10,000	3	3.60
5	Purchase Officer	8,000	1	0.96
6	Accountant	8,000	1	0.96
7	Sales Man	8,000	3	2.88
8	Peon	5,000	1	0.60
9	Technician	6,000	1	0.72
	Total		26	21.72

9. IMPLEMENTATION SCHEDULE

This project can be easily implemented in four months if ready land & building are purchased and financing arrangements are made in time. The equipment are easily available with a short delivery period.

10. COST OF PROJECT

The cost of project as per market rate of factory building, machinery, miscellaneous items, working capital margin and preliminary and pre-operative expenses works out as under:

Cost of Project

Sr. No.	Particulars	₹ in Lacs
1	Land	110.00
2	Building	34.00
3	Plant & Machinery	50.20
4	Furniture, Electrical Installations	13.00
5	Other Assets including Preliminary / Pre-operative expenses	8.00
6	Margin for Working Capital	11.06
	Total	226.26

11. MEANS OF FINANCE

Based on the present norms of the bank, means of finance is worked out as under.

Means of Finance

Sr. No.	Particulars	₹ in Lacs
1	Promoter's contribution	90.50
2	Bank Finance	135.76
	Total	226.26

12. WORKING CAPITAL CALCULATION

Working capital required for storage of raw materials and finished goods, monthly overheads, goods in process, receivables and trade credit is worked out based on the present norms of the bank as under.

Working Capital Calculations

Sr. No.	Particulars	Gross Amt.	Margin %	Margin Amt.	Bank Finance
1	Inventories	6.71	30%	2.01	4.70
2	Receivables	24.38	30%	7.31	17.06
3	Overheads	1.73	100%	1.73	-
4	Creditors	-	30%	-	-
	Total	32.82		11.06	21.76

13. LIST OF MACHINERY REQUIRED AND THEIR MANUFACTURERS

For the production of detergent powder and cake main equipment required is Ribbon Blender, Vibrating Screen, Detergent Cake Machine, Packing Machine for Detergent Powder and Cake, Weighing Scale, Laboratory Equipment, Material Handling Equipment

- RAMESHWAR STEEL FAB
7 Ram Industrial Park,
Near Panchratana estate,
Ramol Cross Road,
Vatva,
Ahmedabad
- RISING INDUSTRIES
Tanushree Apartment (Ground Floor),
Jhowtala, Hatiara,
Near Lokenath Mandir Ghosh Dutta Para,
Opposite Of Honda Service Center,
Kolkata
- Novochem Engineering India LLP
Block A,
Pochanpur Colony,
Dwarka,
New Delhi

14. PROFITABILITY CALCULATIONS

The profitability is worked out as under after taking into account all variable and fixed expenses as under.

Profitability Calculation

Sr. No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
1	Sales	204.75	234	263.25	263.25	263.25
2	Raw Materials & Other direct inputs	146.363	167.272	188.181	188.181	188.181
3	Gross Margin	58.387	66.728	75.069	75.069	75.069
4	Overheads except interest	14.546	16.624	18.702	18.702	18.702
5	Interest	12.432	14.208	15.984	15.984	15.984
6	Depreciation	6.454	7.376	8.298	8.298	8.298

7	Net Profit before tax	24.948	28.512	32.076	32.076	32.076
---	-----------------------	--------	--------	--------	--------	--------

The proposed unit will have the production capacity of 300 MT of detergent powder and 250MT of detergent cake per year. The unit cost of power is taken at Rs. 8. The depreciation on building is taken at the rate of 5% whereas for plant and machinery it is at 10%.

The sales price of detergent powder is taken at the rate of Rs. 60 per Kg. and for detergent cake it is Rs. 45 per Kg. on an average for proposed formulations.

15. BREAKEVEN ANALYSIS

The Break-Even point as percentage of targeted sales works out as under.

Cash Break-Even (as % of Targeted sales)

Sr. No.	Particulars	UOM	Value
1	Sales Realization	₹. In Lacs	292.50
2	Variable costs	₹. In Lacs	209.09
3	Fixed costs incl. interest	₹. In Lacs	38.55
4	BEP = $FC/SR-VC \times 100$ =	% of sales	46.21%

16. STATUTORY/ GOVERNMENT APPROVALS

There is no specific statutory requirement for Cleaning material industry. However, MSME & GST registration, IEC Code for Export of end products and local authority clearance may be required for Shops and Establishment, for Fire and Safety requirement and registration for ESI, PF and Labour laws may be required if applicable. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

17. BACKWARD AND FORWARD INTEGRATION

Acid slurry is basic and important raw material for the production of detergent powder. As backward integration, promotor can think of making acid slurry for captive

consumption with an investment of rupees two lakhs. Products similar to detergent powder are liquid detergent and cake. These can take up as forward integration once the main products is stabilized in the market.

18. TRAINING CENTERS/COURSES

For detergent powder and cake technical training, promoter may look for Khadi and Village Industries Training Institutes set up by state governments and KVIC, Mumbai. There is specialized institute for cleaning products training namely Diamond Jubilee Institute, Vadodara, Gujarat.

Udyamimitraportal (link : www.udyamimitra.in) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship development programs help to run businesses successfully and are available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

Disclaimer:

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.