PLASTIC BOTTLES (PET)

INTRODUCTION

The packaging of hand Sanitizer in PET blow molded bottles is preferred because of the high clarity, good impact and availability in assorted shapes and color tints to provide sales appeal. Major reputed producers of hand Sanitizer have standardized the marketing of their products in PET blow molded bottles.

The basic variance in shape is the circular and oval type. The popular marketing sizes and related bottle weight for oval bottle range from:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Particulars</th>
<th>Particulars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50 ml – 10 gms</td>
<td>200 ml – 25 gms</td>
</tr>
<tr>
<td>2</td>
<td>100 ml – 17 gms</td>
<td>250 ml – 39 gms</td>
</tr>
<tr>
<td>3</td>
<td>125 ml – 18 gms</td>
<td>300 ml – 42 gms</td>
</tr>
<tr>
<td>5</td>
<td>500 ml – 60 gms</td>
<td>1000 ml – 90 gms</td>
</tr>
</tbody>
</table>

The circular bottle will have a 10 to 15% lower weight for above capacity sizes.

1. PRODUCTS AND ITS APPLICATION
Most of the Hand Sanitizer producing companies prefers PET bottles because of its convenience both for the consumers and producers. It is easy to handle and less weight compared to glass/tin bottles. While marketing it is advantageous to have very distinct shapes and colours. Additional products hand sanitizer which can be packed in PET bottles and containers would be oils, deodorants, talcum powder, creams, hair tonic, containers, skin lotions etc.
2. Market Potential

The demand and consumption of hand sanitizer and hand hygiene products are increased tremendously due to Global pandemic of COVID-19 globally. It becomes very essential products for safety of the people in the country. Hence, the necessity mass production is increased and demand as well of its market which is linked with the COVID-19 cases growth in the country / global pandemic. The future growth is depend on severity of disease all market is expected to grow at the rate of around Twenty Times due to the increase in COVID-19. New entrants and local brands now dominate India’s sanitiser market that swelled more than fourfold after the novel coronavirus outbreak. The size of the category touched Rs 43 crore in March from Rs 10 crore a year ago, according to Nielsen India, as the highly contagious pathogen spread rapidly despite the world’s strictest lockdown. A total of 152 new manufacturers started making sanitisers in India. According to a contract manufacturer of sanitisers, companies need a drug manufacturing licence if their product claims that it kills 99.9 percent of the germs, else they can produce under a cosmetic licence. The market is currently witnessing supply of bigger stock keeping units — a distinct type of item for sale.
3. DESIRED QUALIFICATION FOR PROMOTER

The Promoter should have preferably a basic degree in plastic engineering/ processing or a degree/ diploma in engineering / or a degree in chemistry. Experience of at least two to three years in plastic industry is desirable.

4. Industry Outlook/Trend

Plastic and Polymer industries in India is growing at about 5% per annum. There are mainly two types of polymers such as commodity plastics and engineering plastics. The products in commodity plastics are well developed and growing at lesser space than engineering plastics. The trend in consuming industries is to have more sophisticated and attractive packaging. Therefore the demand for well-designed and printed bottles are ever increasing. Moreover glass packing material is being replaced by plastic due to ease of production, reduced cost, printability and impact resistance.

The demand for PET blow molded items is increasing, on everyday basis. Lot of consumer products are packed in PET molded items. Hence, market potential is not a hurdle for any new entrepreneurs as the personal care sector is growing rapidly. The simplest shape to blow is a sphere and this is the most economical in terms of surface are to content in a given volume. Other shape preferred is oval. The consuming sector such as hand sanitizers, shampoo and other personal care products are growing at the rate of 14% per annum.

5. RAW MATERIAL REQUIREMENTS

The major raw material is blow moulding grade PET. This is available from Reliance Industries Ltd. Haldia Petrochemicals, GAIL etc.
6.MANUFACTURING PROCESS

There are two types: (1) Blow moulding process and (2) Extrusion blow moulding & injection blow moulding.

The extrusion blow moulding process begins with plastication, which involves production by extrusion of a “PARISON”. The mould seals off the top end of the parison. A blowing pin is inserted from the bottom and compressed air is blow through it. This parison thus takes the shape of the mould cavity.

The following properties of end product must be ensured during manufacturing:

- Uniform wall thickness of the container
- Weight of different articles produced in a production run should be consistent
- Uniform color dispensation throughout the article
- Specified dimensional accuracy.

Factory that would be important in replacing conventional packaging materials with PET Hand Sanitizer, shampoo bottles, hair oils are as follows:

- Economics
- Clarity/Appearance factors
- Functional Container Performance
- Top Load
- Vacuum Resistance
- Impact Strength
- Flexibility
- Availability of Raw Materials

Run Lengths by Size and Filling Locations
7. MANPOWER REQUIREMENT

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Particulars</th>
<th>Number</th>
<th>Salary Per Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Production Engineer/Manager</td>
<td>1</td>
<td>20,000</td>
</tr>
<tr>
<td>2</td>
<td>Sales Executive</td>
<td>2</td>
<td>20,000</td>
</tr>
<tr>
<td>3</td>
<td>Accountant</td>
<td>1</td>
<td>10,000</td>
</tr>
<tr>
<td>4</td>
<td>Store Keeper-cum-Clerk</td>
<td>1</td>
<td>8,000</td>
</tr>
<tr>
<td>5</td>
<td>Watchman</td>
<td>1</td>
<td>5,000</td>
</tr>
<tr>
<td>6</td>
<td>Supervisor</td>
<td>2</td>
<td>16,000</td>
</tr>
<tr>
<td>7</td>
<td>Technicians</td>
<td>2</td>
<td>24,000</td>
</tr>
<tr>
<td>8</td>
<td>Workmen</td>
<td>15</td>
<td>75,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>25</strong></td>
<td><strong>1,78,000</strong></td>
</tr>
</tbody>
</table>

8. IMPLEMENTATION SCHEDULE

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Particulars</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Time requirement for preparation of Project report</td>
<td>Two months</td>
</tr>
<tr>
<td>2</td>
<td>Time requirement for selection of Site</td>
<td>One month</td>
</tr>
<tr>
<td>3</td>
<td>Time required for registration as Small Scale Unit</td>
<td>One Week</td>
</tr>
<tr>
<td>4</td>
<td>Time required for acquiring the loan</td>
<td>Three months</td>
</tr>
<tr>
<td></td>
<td>Machinery procurement, erection and commissioning</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Recruitment of laborer etc.</td>
<td>One month</td>
</tr>
<tr>
<td>6</td>
<td>Trial runs</td>
<td>One month</td>
</tr>
</tbody>
</table>

9. COST OF PROJECT

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Particulars</th>
<th>Rs in lakhs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Land and Building</td>
<td>35.00</td>
</tr>
<tr>
<td>2</td>
<td>Plant and Machinery (Injection Moulding / Blow Moulding Machine with Cooling Tower)</td>
<td>16.85</td>
</tr>
<tr>
<td>3</td>
<td>Miscellaneous Assets</td>
<td>18.00</td>
</tr>
<tr>
<td>4</td>
<td>P &amp; P Expenses</td>
<td>15.00</td>
</tr>
<tr>
<td>5</td>
<td>Contingencies @ 10% on land and building and plant and machinery</td>
<td>30.60</td>
</tr>
<tr>
<td>6</td>
<td>Working capital margin</td>
<td>34.68</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>150.13</strong></td>
</tr>
</tbody>
</table>
10. MEANS OF FINANCE

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Particulars</th>
<th>Rs. In lakhs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>promoters contribution</td>
<td>37.5325</td>
</tr>
<tr>
<td>2</td>
<td>Bank Finance</td>
<td>112.5975</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>150.13</td>
</tr>
</tbody>
</table>

11. WORKING CAPITAL CALCULATION

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Particulars</th>
<th>Monthly Consumption</th>
<th>Total value</th>
<th>PROMOTER'S MARGIN</th>
<th>Margin amount</th>
<th>Bank finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Staff and labour</td>
<td>1</td>
<td>21.36</td>
<td>100%</td>
<td>21.36</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Raw materials</td>
<td>8.17</td>
<td>4.90</td>
<td>60%</td>
<td>2.94</td>
<td>1.96</td>
</tr>
<tr>
<td>3</td>
<td>Utilities</td>
<td>0.5</td>
<td>3.24</td>
<td>25%</td>
<td>0.81</td>
<td>2.43</td>
</tr>
<tr>
<td>4</td>
<td>other expenses</td>
<td>1</td>
<td>1.32</td>
<td>50%</td>
<td>0.66</td>
<td>0.66</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30.82</td>
<td>25.77</td>
<td>5.06</td>
<td></td>
<td>5.0</td>
</tr>
</tbody>
</table>

12. LIST OF MACHINERY REQUIRED AND THEIR MANUFACTURERS

Blow moulding machines for PET shampoo bottles are available from Thailand, Vietnam, India and China. The proposed capacity of the plant would be 140 tonnes per annum.

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Particulars</th>
<th>Nos.</th>
<th>Rs in lakhs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hand operated station injection blow moulding machine-120gms-1.25 liters</td>
<td>1</td>
<td>6.00</td>
</tr>
<tr>
<td>2</td>
<td>Hand operated station injection moulding machine-180gms-250 liters.</td>
<td>1</td>
<td>8.00</td>
</tr>
<tr>
<td>3</td>
<td>Compressor 1 HP capacity</td>
<td>1</td>
<td>0.10</td>
</tr>
<tr>
<td>4</td>
<td>Mould &amp; Dies</td>
<td>6</td>
<td>2.40</td>
</tr>
<tr>
<td>5</td>
<td>Electrification and erection</td>
<td></td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>16.65</td>
</tr>
</tbody>
</table>
13. PROFITABILITY CALCULATIONS

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(A) Sales Realization</strong></td>
<td>11637500</td>
<td>13300000</td>
<td>14962500</td>
<td>14962500</td>
<td>14962500</td>
</tr>
<tr>
<td><strong>(B) Cost of Production</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw materials</td>
<td>5880000</td>
<td>6720000</td>
<td>7560000</td>
<td>7560000</td>
<td>7560000</td>
</tr>
<tr>
<td>Utilities</td>
<td>226800</td>
<td>259200</td>
<td>291600</td>
<td>291600</td>
<td>291600</td>
</tr>
<tr>
<td>Salaries</td>
<td>1569960</td>
<td>1783560</td>
<td>1997160</td>
<td>1997160</td>
<td>1997160</td>
</tr>
<tr>
<td>Stores and Spares</td>
<td>882000</td>
<td>1008000</td>
<td>1134000</td>
<td>1134000</td>
<td>1134000</td>
</tr>
<tr>
<td>Repairs and maintenance</td>
<td>504000</td>
<td>576000</td>
<td>648000</td>
<td>648000</td>
<td>648000</td>
</tr>
<tr>
<td>Selling expenses @20%</td>
<td>504000</td>
<td>576000</td>
<td>648000</td>
<td>648000</td>
<td>648000</td>
</tr>
<tr>
<td>Administrative Expenses (other expenses)</td>
<td>92400</td>
<td>105600</td>
<td>118800</td>
<td>118800</td>
<td>118800</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9659160</td>
<td>11028360</td>
<td>12397560</td>
<td>12397560</td>
<td>12397560</td>
</tr>
<tr>
<td><strong>(C) Profit before interest &amp; depreciation</strong></td>
<td>1978340</td>
<td>2271640</td>
<td>2564940</td>
<td>2564940</td>
<td>2564940</td>
</tr>
<tr>
<td>depreciation</td>
<td>249750</td>
<td>249750</td>
<td>249750</td>
<td>249750</td>
<td>249750</td>
</tr>
</tbody>
</table>
Particulars | Year 1 | Year 2 | Year 3 | Year 4 | Year 5  
--- | --- | --- | --- | --- | ---  
Profit Before term loan and tax | 1728590 | 2021890 | 2315190 | 2315190 | 2315190  
Interest on term loan (11%) | 1194337 | 1061633 | 884694 | 707755 | 530816  
Profit before tax | 534253 | 960257 | 1430496 | 1607435 | 1784374  
Tax (30%) | 160275.9 | 288077.1 | 429148.8 | 482230.5 | 535312.2  
Total Profit | 373977.1 | 672179.9 | 1001347 | 1125204.5 | 1249061.8  

14. BREAKEVEN ANALYSIS

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Fixed Cost (FC):</th>
<th>Rs. In lakhs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wages &amp; Salaries</td>
<td>15.69</td>
</tr>
<tr>
<td>2</td>
<td>Repairs &amp; Maintenance</td>
<td>0.50</td>
</tr>
<tr>
<td>3</td>
<td>Depreciation</td>
<td>2.49</td>
</tr>
<tr>
<td>4</td>
<td>Admin. &amp; General expenses</td>
<td>0.92</td>
</tr>
<tr>
<td>5</td>
<td>Interest on Term Loan</td>
<td>11.94</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>31.40</strong></td>
</tr>
</tbody>
</table>

Fixed Cost: 31.40  
Profit Before Tax: 5.34  
**BEP = FC x 100/FC+P**  
31.40/36.74 x 70/100 x 100  
59.82

15. STATUTORY/ GOVERNMENT APPROVALS

There is no specific statutory requirement for plastic processing 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.
16. **BACKWARD AND FORWARD INTEGRATION**

There is no possibility of backward linkages in this case. However as forward linkages promoter may think of going for higher volume capacity bottles, printing on bottles and also use of other polymers like HDPE and PP.

17. **TRAINING CENTERS/COURSES**

For plastic processing industry training and short term courses may be availed from the Central Institute of Plastic Engineering and Technology (CIPET), Guindy, Tamil Nadu and its regional centers. More over training and guidance are also provided by polymer manufacturers such as Reliance Industries Limited. Udyamimitra portal ( link : www.udyamimitra.in ) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

**MACHINERY & EQUIPMENT SUPPLIERS**

1) **A-ONE ENGINEERING**
71/2 Phase – 1, GIDC Vatva, Ahmedabad-382 445  
Phone : 079-25834843 Fax: 079-25834843  
E-mail : aoneengineering@rediffmail.com  
Web: www.aoneengineering.com  
Products/Services : Plastic Processing machinery (Bag making machine)

2) **A ONE INTERNATIONAL**
11, Amar Estate, Anil Starch Road,  
Opp: Super Bread Factory,  
Naroda Road, Ahmedabad-380 025.  
Phone: 079-22201482/22201861 Fax: +91-79-22203684  
E-mail: aonead1@sancharnet.in Web: http://www.newyesh.com  
Products/Services: HDPE/PP Woven Sack Machinery:
1) High speed 4,6 & 8 shuttle circular looms
2) High speed magnetic type cheese winders
3) Flexographic printing machines
4) Bale Press Machines
5) Sutli Plant
6) Sutli Monofilament box strapping & all types of winders
7) Spares for all the above
3) **AMBICA PLASTIC MACHINERY MANUFACTURERS**
1-2, Kansawala Estate, Opp: Chakudia Mahadev, Rakhial, Ahmedabad-23. (Guj.) INDIA
Phone: (O) +91-79-2274 5089, 6512 6275  Fax: +91-79-2278 2613
Cell: 098251 57891, 092274 48246
E-mail: info@ambicaplastic.com/ambica_kalpesh@hotmail.com
Web: www.ambicaplastic.com

4) **CENTRAL MACHINERY & PLASTIC PRODUCTS**
1, Lajya Estate, Mogra Road, Andheri East, Mumbai-400 069.
Phone : +91-22-28366198  Fax: +91-22-28375271
E-mail: cmp@bom3.vsnl.net.in   Web : www.cmppin.com
Products/Services : Manufacturers of fully automatic blow moulding Machines for processing of PVC, HDPE, LDPE, PP materials from 5 ml. to 60 ltrs.

5) **DYNAMIC ENGINEERS (INDIA)**
B-54, Hari Nagar (Clock Tower), New Delhi-110 064.
Phone: 011-25496293/25126188
E-mail: dynamicengineers@trade-india.com

6) **FERROMATIC MILACRON INDIA LTD.**
92 Phase – I GIDC, Vatva, Ahmedabad-382 445
Phone: 079-25890081  Fax: 079-25830125
E-mail: sales@fmi-ahd.com  Web: www.milacronindia.com
Products/Services : Mfg. of plastics injection moulding machines from the Range of 30 tons to 3000 tons and extrusion blow moulding machines.

7) **FIVE STAR ENGINEERS**
Bhagwati Estate, Opp: Bavri Kumbharwada, Idgah Road, Pratapnagar, Baroda-390 004.
Phone : (F) 0265-2581698  Telefax : 2580026  (R) 0265-2564896 
(M) 098980 87865   E-mail: fivestarengineer@hotmail.com
Web : www.fivestarengineers.com
Products/Services : Double Die Extruder, Single Die Extruder
8) **FIXOPAN MACHINES PVT. LTD.**  
71, Nehru Place, New Delhi-110 019  
Phone: 0129-2237212/5067210-12 Fax: 0129-2237672  
E-mail: roto@fixopan.net/sales @fixopan.net  
Web: www.fixopan.net  
Products/Services: Manufacturers of Rotomoulding machines, Pulverisers, Molds in cast aluminium/SS/MS, finished roto parts/planters.

9) **GUJARAT MACHINERY**  
Plot No. 524, GIDC Phase II, Vatva, Ahmedabad-382 445.  
Phone: +91-79 25830043 Fax: 079 25332439  
E-mail: intek@icenet Web: www.gujaratmachinery.com  
Products/Services: Plastic machinery viz: Wide Width Lamination Plants.

10) **JAGMOHAN INDUSTRIES**  
115 Sharad Industrial Estate, Lake Road, Bhandup (West), Mumbai-400 078.  
Phone: 25950246 Fax: 25965434  
E-mail: jagmohan@vsnl.com Web: www.jagmohan.com  
Products/Services: Plastic Automatic Blow Moulding Machine from 100 Ml to 1000 Ltrs.

11) **JAI MATA ENGINEERING**  
No. 734, Rajagopalanagar, B/h Maruti Theatre, Peenya 2nd Stage, Bangalore-560 058.  
Phone: 080-6763 4323 Cell.: 093437 33300, 098862 14330  

12) **KABRA EXTRUSIONTECHNIK LTD.**  
Kolssite House, Veera Desai Road, Andheri (West), Numbai-400 053.  
Phone: 26734822/24 Fax: 267335041  
E-mail: sales@kolsitegroup.com Web: www.kolsite.com  
Products/Services: Twin screw extruders for RPVC pipes/profiles/pellets high output single screw extruders for PO pipes raffia tape plants & cheese winders monolayer & multilayer film plants.
13) **KONARK PLASTOMECH PVT. LTD.**
Plot No. 81, GIDC, Odhav, Ambica Nagar Road, Ahmedabad-382 415.
Phone : 079-22281670 Fax : +91-79-22890874
E-mail : sales@konarkplasticmachinery.com
Web : www.konarkplastomech.com
Products/Services : Mfrs. Thermoplastic extrusion plants.

14) **LARSEN & TOUBRO Ltd.**
LTM Business Unit, Mount-Poonamallee Road,
Post Bag No. 990, Chennai-600 089.
Phone: 22497360 Fax: 044-22492471
E-mail : vpb@ltmindia.com Web: www.ltmindia.com
Products/Services : Injection Moulding Machines, Auxiliary Equipment

15) **LOHIA STARLINGER LIMITED**
D-3/A, Panki Industrial Estate, Kanpur-208 022.
Phone : +91-5112-282001 Fax : +91-5112-282205
E-mail: sales@lohiagroup.com
Web : www.lohiagroup.com

16) **MACPLAST**
49, Shreenathji Estate, Nr. Panna Estate, B/h B.O.C. Gases, Rakhial, Ahmedabad-380 021 (Guj.) INDIA
Phone : (F) 079-22746802
E-mail : macplastbp@hotmail.com/macplastbp@rediff.com
Products/Services : Multi Layer Film Plant, Two Layer PPTQ Blown Film Plant, Twin Head Mono Layer Blown Film Plant, Sutli Plants, Box Strapping Plants, LDPE Kisna Pipe Plants, HDPE Pipe Plants, Reprocess Plants, Woven Sacks Tape Plant.

17) **MAMATA BRAMPTON ENGINEERING PVT. LTD.**
5/1/1A/1, GIDC, Phase-1, Vatva, Ahmedabad-382 445.
Phone: 079-55309800 Fax: 079-25832026
E-mail: info@mamata.com
Products/Services : Multilayer co-ex blown film plant

18) **MAMATA MACHINERY PVT. LTD.**
5/1/1A, GIDC Estate, Phase-1, Vatva, Ahmedabad-382 445.
Phone: 079-55309800 Fax: 079-25832026
E-mail: info@mamata.com Web : www.mamata.com
Products/Services : Plastic Bag & Pouch making machine, Packaging machines.
19) **NEOPLAST ENGINEERING PVT. LTD.**
43, GIDC Estate, Phase-1, Vatva, Ahmedabad-382 445.
Phone : +91-79-25831185 Fax : +91-79-25835298
E-mail : info@neoplastindia.com Web : www.neoplasstindia.com
Products/Services : Complete compounding plant with automation, High speed heater cooler mixers, Single screw extruders, Super conical twin screw extruders, Down stream equipments for R PVC pipe, profile, pelletizing application, Under water pelletizing system, Air cooled die face pelletizing system, Material handling system, Liquid metering/Dosing system, Anti-dusting/de-gassing system, Lababoratory scale equipments like – lab mixer, single screw extruder with various attachments, two roll mill, hydraulic press.

20) **PANCHAL PLASTIC MACHINERY P. LTD.**
Plot No. 127, GIDC, Umbergaon, Dist. Valsad-396 171
Phone : 0260-2563391/92 Fax : 0260-2562892
E-mail: panchal@panchal-plastic.com Web: www.panchal-plastic.com

21) **R.R. PLAST EXTRUSIONS PVT. LTD.**
B-3, Nand Jyot Ind. Estate, Safed Pool, Sakinaka, Andheri-Kurla Road, Andheri (E), Mumbai-400 072.
Phone : +91-22-2852 0396/2850 5208 Telefax : 2850 9603
Cell : 9967023161 E-mail : rrengg@vsnl.net/mkt@rrengg.com
Web : www.rrengg.com
Products/Services : RR’s Drip Irrigation Pipe Plant with Auto Coiler

22) **RAJOO ENGINEERS LIMITED**
Survey No.210, Plot No.1, Industrial Area
Veraval Shapar, Rajkot-360 002.
Phone : 0091-2827-252701/2 Fax : 0091-2827-252700
E-mail : rel@rajoo.com Web. www.rajoo.com
23)  **RANA & SONS**  
Plot No. 128-A, Govt. Ind. Estate, Charkop Kandivali West, Mumbai-400 067.  
Phone : 28683897/4181  Fax: +91-22-28682244  
E-mail: ranasons@vsnl.com/arun@bom7.vsnl.net.in  
Web: www.ranasons.com  
Products/Services : Blow Moulding Machine, Injection Moulding Machines, PET Stretch Blow Moulding Machines.

24)  **REMICA PLASTIC MACHINERY MANUFACTURERS**  
Phone : 079-25712741  Fax: 079-25714234  
E-mail : remicaa1@sancharnet.in  
Web: www.remicaplastics.com  
Products/Services : Manufacturers of Thermoplastic Extrusion Plants for Tapeline, Circular Looms, Extrusion Lamination Plants.

25)  **STAR FLEX INTERNATIONAL**  
A-43, Street No. 7, Anand Parbat Industrial area, New Rohtak Road, New Delhi-110 005.  
Phone : +91-11-2876 5588  Telefax: +91-11-2876 5588  
Mobile : 093111 45588, (TATA) 092135 02930  
Products/Services : High Class Flexographic/Rotogravure Printing Machine.

26)  **SUNRISE PLASTIC MACHINERY MANUFACTURER**  
B/21-22, Ambica Estate, Ambikanagar, Nr. Hanuman Temple, Odhav, Ahmedabad-382 415 (Guj.) INDIA.  
Phone : (O) 079-65137486  
Cell : 098253 58581, 098256 15776, 098793 01422  
E-mail : joshisunriseplasticmachinery@yahoo.co.in  
Web: www.sunriseplastic.tradeindia.com  

27)  **TWIST ENGINEERING WORKS**  
C/1, 4410, Phase-4, G.I.D.C. Estate, B/h Indo-German Tool Room, Vatva, Ahmedabad-382 445 (Guj.) INDIA  
Phone : (O) 079-25842878, 30913587 Fax: 079-25840429  
E-mail : twist@sancharnet.in, twist24@rediffmail.com  
Web: www.twistplasticmachinery.com  
Products/Services : Extrusion Plants for – Rigid PVC, HDPE, HM/HDPE, LLDPE, LDPE and PP Blown Film Plant, Above Plants with Rotating Extruder/Rotating Die, Pipe, Casing Caping, Section & sleeve Plants for PVC/HDPE PP & PP-R, PVC Braided & Suction Hose Multilayer Co-Extrusion Film Plants, Plastic Sheet Plant with Teedie & Steel Polishing Stack, PVC Wire/Cable Plant & Spool Drum/Winder, PVC Compounding Plant with Die-Face Cutter & Reprocessing Plant, PP/HD Box Strapping Plant, Rafia Tape Plant, Scrap Grinder and Agglomerater, Special Specification Plants on request & Extruders with
‘Realloy’ Barrel, LD Foam Film Plant, Automatic Pipe Cutter, High Speed Mixers & Heater-Cooler Mixer

ANNEXURE - II

RAW MATERIAL SUPPLIERS

1. BASF STYRENNICS PVT. LTD.
   RBC Mahindra Towers
   5th Floor B-Wing, Dr. G.M. Bhonsale Marg
   Worli, Mumbai – 400 018
   Phone: 55618227   Fax: 56604073
   E-mail: ramanamv@basf-india.co.in   Web: www.basf.com
   Products: ESCR Polystyrene, ABS, SAN, MABS, ASA Blends etc.

2. BAYER MATERIAL SCIENCE PVT.LTD.
   Building D-527, Kolshet Road, Thane – 400 607
   Phone: 91-22-25311297/285 Fax: 25455069
   E-mail: plastics@bayerbms.com   Web: www.bayermaterialscience.com
   Products: Polycarbonate (PC) PC Films & PC Sheets, PC Blends

3. DOW CHEMICAL PACIFIC (SINGAPORE) PTE LTD.
   260 Orchard Road, # 18-01, The Heeren, Singapore – 238855
   Phone: (65) 68353773  Fax: (65) 68340320
   E-mail: dowcig@dow.com   Web: www.dowplastics.com
   Products: Polyethylene resins, Polystyrene, Polypropylene, Engineering Thermoplastics, Elastomers and Speciality Products, and Wire & Cable Compounds.

4. DSM ENGINEERING PLASTICS INDIA (P) LTD.
   “Ashirvad” 110/12 Erandawane
   Lane No. 14 Income Tax Lane, Off Prabhat Road
   PUNE – 411 004
   Phone: 020-25461075/39506264  Fax: 020-25455259
   E-mail: joydeep.sen-chaudhuri@dsm.com   Web: www.dsmep.com
   Products: Stanyl (PA 4,6) Amite (TPE-E), Akulon (PA 6, pa 66), Amite (PBT, PET and blends)

5. GE PLASTICS INDIA
   8th Floor, Gateway Towers, DLF – III, NH – 8
   Gurgaon – 122 002
   Phone: 0124-5018001  Fax: 0124-5018019
   E-mail: rk.arora@ge.com   Web: www.geplasticsindia.com
6. **Gharda Chemicals Ltd.**  
Plot No. 3525 – 26 – 27, GIDC Estate, Panoli  
Dist. Bharuch, Gujarat – 394 116  
Phone: 02646 – 272575 /6  Fax: 02646 – 272141  
E-mail: Polymer@gharda.com  
Web: www.ghardapolymers.com  
Products: Polymers PEEK, PEK, PES, PSS, PPSU, PSU

7. **Haldia Petrochemicals Ltd.**  
1, Auckland Place, Kolkata – 700 017  
Phone: 033-22831640/3/5  Fax: 033 – 22831654  
Web: www.haldiapetrochemicals.com  
Products: LLDPE, HDPE, PP, Benzene, Butadiene, MS Euro III, LGP, PY Gas, Cyclopentane.

8. **Indian Oil Corporation Limited**  
Scope Complex, Core-2, 7 Institutional Area  
Lodhi Road, New Delhi – 110 003  
Phone: 011-24360214  Fax: 011 – 24367548  
E-mail: khuranavk@iocl.co.in  
Web: www.indianoilcorp.com  
Product: PP- 600 KTA, HDPE – 300 KTA, hdpe/ldpe – 350 KTA, MEG – 300 KTA, PTA – 553 KTA.

9. **J.P. Polymers Pvt. Ltd.**  
3, Shram Laxmi Industrial Est.  
Opp. Indiana Bakery, Kanchpada, Ramchandra Lane Extn. Road.  
Malad (W), Mumbai – 400 064.  
Phone: 56998881 – 84  Fax: 56998887  
E-mail: mail@jppolymers.net  
Products: Polycarbonate (Dupont), Nylon’6, Nylon’66 & PBT 9SRF), Acrylic-PMMA (Sumitomo), K-Resin (Philips), Transparent ABS (Toray), POM, UHMW-PE, ABS & SAN

10. **Reliance Industries Ltd.**  
Maker Chambers-IV, Nariman Point, Mumabi – 400 021  
Phone: 30322100  Fax: 30322199  
E-mail: tushar_roy@ril.com  
Web: www.ril.com  
Products: Polymers, Chemicals, Fibers & Intermediates

11. **Supreme Petrochem Ltd.**  
17/18, Shah Industrial Estate, Veera Desai Road  
Andheri (West), Mumbai – 400 053.  
Phone: 26736196 – 99  Fax: 26736203  
E-mail: sharad_parate@spl.co. on  Web: www.supremepetrochem.com  
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. It is a Model Project so please be confirm the PET Polymer, Machinery rates from prevailing market rates because it is variable.