# PROJECT PROFILE

# ON

# DISPOSABLE SYRINGES

## MONTH & YEAR
## JULY 2011


## PREPARED BY
## TANSTIA – FNF SERVICE CENTRE
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# DISPOSABLE SYRINGES

## INTRODUCTION

Disposable syringes are made of Polypropylene. They are available in the sizes of 1ml,2 ml, 5 ml,10ml .There is widespread awareness of health consciousness and there is a need for disposable needle. Disposable syringes are necessarily used by all doctors and nursing homes throughout the country.

## MARKET POTENTIAL

The plastics industry seems to be going through a major change as the processing units shift focus from traditional packaging to newer segments such as equipment manufacturing for automobiles, agriculture, poultry farming, agriculture and blown films.

The plastics product manufacturing and processing business, which employs over 3.6 million people directly in India, is considered as one of the most sought after industries among the entrepreneurs and start ups in India. The industry is growing at an annual rate of over 15 per cent and the emerging segments include agro-based as well as consumer based.

The proposed investment of Rs 1.5 lakh crore ($37 billion) in upstream industry to set up 11 petrochemical complexes in India is expected to provide impetus for growth of polymer consumption to 15 million tonnes by 2015 according to Mr. Ashok Goel, President, Plastindia Foundation.
The Indian plastics industry, he said, has seen a consistent growth of over 15 per cent over the past five years, and the per-person consumption has doubled over the last four years to eight kg in 2010. This is expected to increase to 10 kg by 2012 and to be on par with the

global consumption, 27 kg, by 2020 because of the increasing consumption across sectors like packaging, infrastructure, agriculture, automotives, healthcare and FMCG. In agriculture alone, around 17 million hectares are to be brought under drip irrigation according to the Union Ministry of Agriculture over the next three-four years. This leads to a tremendous potential for use of plastics in irrigation and plastic pipes, Mr. Goel said.

INDIA- one of the fastest growing economies of the world, is all set to attain the premier status along with China. India is a favoured destination for overseas investors and offers the advantages of an open economy, increasing liberalization, a stable democratic political scenario, highly skilled work force with fluency in English. After liberalization of the economy in 1992, the Government of India has been quite supportive of industry in general, taking many steps over the years for the conducive growth of business. These measures favouring economic growth, are being continuously taken by the Indian Government, irrespective of the change in power. The Government of India is endeavouring to achieve GDP growth of more than 7% in the next 10 years. It is quite possible that plastics could grow at 14%, based on historical performance.

The Indian plastics industry, with more than 4 million tons consumption in 2003 is well spread all over India. While it is estimated to be fragmented across more than 30,000 processors, the large processors are less than 100. These 100 have about 35% share of the plastics processing industry. The historical growth of the plastics industry over the last few decades is at an impressive 12-14%, which is twice the GDP growth. The major driver of this growth is the increased standard of living of people in India (housing the second largest population in the world). It is estimated that almost 35% of the 1.2 billion population has a

purchasing power equivalent to that in European countries. The plastics industry seems to be going through a major change as the processing units shift focus from traditional packaging to newer segments such as equipment manufacturing for automobiles, agriculture, poultry farming, agriculture and blown films.

The plastics product manufacturing and processing business, which employs over 3.6 million people directly in India, is considered as one of the most sought after industries among the entrepreneurs and start ups in India. The industry is growing at an annual rate of over 15 per cent and the emerging segments include agro-based as well as consumer based.

With the growth in consumption, plastic production in India is likely to grow by 60 per cent to touch 12.75 million tonne by 2012, according to a industry body." Plastic is an integral part of our life and its consumption is growing every year. We are expecting the production to grow by 60 per cent in line with the consumption which will be around 12.75 million tonne by FY 12," according to All India Plastics Manufacturers' Association (AIPMA) .At present, the plastic production as well as the consumption is about eight million tonne.

The consumption has grown significantly over the last two decades and India is projected to be number three in plastic usage by 2015.India's plastics processing sector will grow from 69,000 machines to 150,000 machines by the year 2020. India's demand for plastics in irrigation alone is pegged to cross 2.5 million tonnes by 2015. Indian automobile industry is growing at more than 18% p.a. and is hungry for plastics. The plastics processing industry is a source of great potential for global businesses. There is tremendous scope for innovative technological upgradations.

## INSTALLED CAPACITY

| **Product** | **No of working hours per day** | **Capacity per day** | **Capacity per annum 300 days per annum** |
|---|---|---|---|
| Disposable syringes-2 ml | 8 | 19200 | 5760000 |
| Disposable syringes-5 ml | 8 | 19200 | 5760000 |

## PLANT AND MACHINERY

| Sl. No | Description | Qty | Rs. in Lakhs |
|---|---|---|---|
| 1. | Zigma Injection Moulding machine | 1 | 35.00 |
| 2. | Sterilisation plant ( Ethylene oxide) | | 10.00 |
| 3. | Blister packaging machine | | 11.50 |
| 4. | Automatic packing machine | | 32.00 |
| 5. | Scrap grinding machine | | 1.00 |
| 6. | Weighing scale | | 1.00 |
| 7. | Air compressor | | 1.00 |
| 8. | Water pump | | 1.00 |
| 9. | Chilling plant | | 3.50 |
| 10. | Testing equipment | | 1.00 |
| 11. | Electricals | | 8.00 |
| 12. | Set of moulds for barrels ( 16 cavity barrel) | | 6.00 |
| 13. | Set of moulds for syringes body 16 cavity for barrel and 16 cavity for plungers) | | 9.00 |
| | **Total** | | **120.00** |

## MANUFACURING PROCESS

Raw material polypropylene is fed into injection moulding machine and moulded in chilled condition to get better clarity. The moulded syringes is then assembled with needle in automatic assembly line. The whole

assembly is then sterilsed in sterilization plant using ethylene oxide. The finished syringes are then packed in blisters with the help of blister packing machine.

## RAW MATERIALS

| | **Qty-MTs** | **Rate/MT** | **Value** |
|---|---|---|---|
| | | | **Rs lakhs** |
| Polypropylene | 82.26 | 92000 | 75.68 |
| Needles Nos | 11760000 | 0.20 | 23.52 |
| TOTAL | | | 99.20 |
| Packing materials | 11520000 | 0.16 | 18.43 |

## LOCATION LAND AND BUILDING

| | | |
|---|---|---|
| Built up area-Sq.ft | | 3500 |
| Rent p.m.-Rs per .10 per sq.ft | | 35000 |
| Advance-10 months. Rs | | 350000 |

## UTILITIES

### Powers & Fuel

| | |
|---|---|
| Three phase- KW | 30.00 |
| Power charges Rs. lakhs p.a | 3.96 |
| Power & fuel | 3.96 |
| Water- For process-Litres per day | 0 |
| For human consumption-litres/day | 200 |

## MANPOWER

| | | Monthly wages | Total |
|---|---|---|---|
| Supervisor | 1 | 9000 | 9000 |
| Skilled | 6 | 7000 | 42000 |
| Unskilled | 12 | 5000 | 60000 |
| Accounts Assistant | 1 | 6000 | 6000 |
| Sales Executive | 1 | 7000 | 7000 |
| Security | 2 | 5000 | 10000 |
| sub total | | | 134000 |
| Add benefits | | 20% | 26800 |
| Total per month | | | 160800 |
| TOTAL PER ANNUM-Rs. lakhs | | | 19.30 |

## SCHEDULE OF IMPLEMENTATION

If the financing arrangements are finalized the project can be implemented in three months time.

## COST OF PRODUCTION AND PROFITABILTY

**Assumptions**

| | |
|---|---|
| Installed capacity | 5760000 pieces of 2 ml syringes per annum<br>5760000 pieces of 5 ml syringes per annum |
| Capacity utilisation | Year-1 -60%<br>Year -2 -70%<br>Year-3 onwards- 80% |
| Selling price | 2 Ml Rs. 1.70<br>5 Ml Rs. 2.00 |

| | |
|---|---|
| Raw materials | As per the details given above |
| Packing materials | As per details given above |
| Power | Rs. 3.96 lakhs per annum at 100% |
| Wages and salaries | Rs. 19.30 lakhs with increase 5% every year. |
| Repairs and Maintenance | Rs.1.20 lakh per annum |
| Depreciation | Written down value method -15 % on machinery |
| Selling general and administrative expenses | Rs.50000 per month |
| Interest on Term loan | 14% per annum |
| Interest on working capital | 14 % per annum |
| Income tax | 34 % on profits |

## **LIST OF MACHINERY SUPPLIERS**:

1.M/s Ossberger - Tubbinen Fabric-Abt, Kunts Heffmachinen 8832,Weissen, BURG/BAZERNM, P. O. Box 425, West Germany.

2.Windsor Machines India Ltd, 2 J, Century Plaza, Teynampet, Chennai – 600 018.

3.Euro pack Machines India Pvt Ltd, 52 Bindal Industrial Estate, Siakinaka, Andheri East, Mumbai – 500 072.

4.Ambica Engineering & Wire Products, L 45, GIDC Estate, Odher, Ahmedabad – 382415,

5.Hind Hydraulics & Engineers, Faridabad, Plot No. 13, Sector 74, Faridabad – 121005.

6.Prasad Groups & Companies, Plot No. 14 – 16 GIDC Industrial Estate, Phase 1 Valva, Ahmedabad – 382445

7.HMT International Ltd, 59 HMT Bhavan, Bellary Road, Bangalore- 560 032.

8. M/s Starline Engineering Services, Ideal Indl. Estate, S. Bapat Marg, Bombay-400 013.

9. M/s Plastopack & Co, 15, Sashibushan Basak Lane, Calcutta-700 036.

10. M/s R & K Enterprises, 829, GIDC, Makarpura, Baroda-390 010.

11. M/s Niranjan Plastics, 19/7, Botwala Building, Mahim, Bombay-400 016.

12. M/s Klockner Windsor (I) Ltd.U-6, U-2 Road, Wage Industrial Estate, Bombay-400 604.

13. M/s Brimco Plastic Machinery (P) Ltd., 55, Brimco House, Govt. Indl. Estate, Bombay-400 067.

## LIST OF RAW MATERIAL SUPPLIERS

Lucky Plastics, 421-c, Sngr Road Gpathy CBE-641606.

Maruthi Plastic, Old – 3 Thirupali ST Sowcarpet- 600 079.

Reliance Industries Ltd A-1 Tower 5th Floor No.89 Dr.Radhakrishnan Salai Mylapore Chennai 600 004.

Shri Swastic Plastics, 57/2, Thirupalli Street – 600 079.

Abs Plastics Ltd, 51 Gidc Industrial Estate, Nadesari – 391340.

Polychem Ltd, 74 Jamshedji Tata Road, Mumbai – 400 020

Sankar Mercantile Agencies, 43 Vysarpadi Industrial Estate, Chennai – 600 039.

Indian Petrochemical Corporation. 89 Santhome High Road, Chennai – 600 028.

PP Industries, 91 Stranhas Road, Ooteri, Chennai – 600 012.

Haldie Petrochemicals, 41 UN Road, T.nagar, Chennai 600 017.

V.B.SREE GanpathyColourCompany, 63, Devaraja Mudali Street, 2nd Floor, Chennai – 600 003.

Prayag Polytech Pvt. LTd. 2468, Prayag House,Nalwa Street, Pahar Ganj, New Delhi – 110 055.

**FINANCIAL ASPECTS**

**1. COST OF PROJECT**

| | [Rs.lakhs] |
|---|---|
| Land & Building (Advance) | 3.50 |
| Plant & Machinery | 120.00 |
| Other Misc. assets | 2.00 |
| Pre-Operative expenses | 5.00 |
| Margin for WC | 3.07 |
| | 133.57 |

**2. MEANS OF FINANCE**

| | |
|---|---|
| Capital | 43.57 |
| Term Loan | 90.00 |
| | 133.57 |

**3. COST OF PRODUCTION & PROFITABILITY STATEMENT**

[Rs.lakhs]

| Years | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Installed Capacity-No of pieces | | | | | |
| 2 ml | 5760000 | 5760000 | 5760000 | 5760000 | 5760000 |
| 5 ml | 5760000 | 5760000 | 5760000 | 5760000 | 5760000 |
| Utilisation | 60% | 70% | 80% | 80% | 80% |
| Production/Sales-No of pieces | | | | | |
| 2 ml | 3456000 | 4032000 | 4608000 | 4608000 | 4608000 |
| 5 ml | 3456000 | 4032000 | 4608000 | 4608000 | 4608000 |
| Selling Price-Rs.per piece. | | | | | |
| 2 ml | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 |
| 5 ml | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Sales Value (Rs.lakhs) | **127.87** | **149.18** | **170.50** | **170.50** | **170.50** |

| | | | | | |
|---|---|---|---|---|---|
| Raw Materials | 59.52 | 69.44 | 79.36 | 79.36 | 79.36 |
| Packing Materials | 11.06 | 12.90 | 14.75 | 14.75 | 14.75 |
| Power & fuel | 2.38 | 2.77 | 3.17 | 3.17 | 3.17 |
| Wages & Salaries | 19.30 | 20.26 | 21.27 | 22.33 | 23.45 |
| Repairs & Maintenance | 1.20 | 1.32 | 1.45 | 1.60 | 1.76 |
| Depreciation | 18.00 | 15.30 | 13.01 | 11.05 | 9.40 |
| Cost of Production | 111.46 | 121.99 | 133.01 | 132.26 | 131.89 |
| Selling, Admin, & General exp | 6.00 | 6.30 | 6.62 | 6.95 | 7.30 |
| Interest on Term Loan | 11.70 | 10.86 | 9.19 | 7.52 | 5.85 |
| Interest on Working Capital | 1.61 | 1.61 | 1.61 | 1.61 | 1.61 |
| Total | 130.77 | 140.76 | 150.43 | 148.34 | 146.65 |
| | | | | | |
| Profit Before Tax | -2.89 | 8.42 | 20.07 | 22.15 | 23.85 |
| Provision for tax | 0.00 | 2.86 | 6.82 | 7.53 | 8.11 |
| Profit After Tax | **-2.89** | **5.56** | **13.25** | **14.62** | **15.74** |
| Add: Depreciation | 18.00 | 15.30 | 13.01 | 11.05 | 9.40 |
| Cash Accruals | 15.11 | 20.86 | 26.26 | 25.68 | 25.14 |
| | | | | | |
| Repayment of Term loan | 0.00 | 12.86 | 12.86 | 12.86 | 12.86 |

## 4. WORKING CAPITAL:

| | Months Consumptions | Values | % | Margin Amount | Bank Finance |
|---|---|---|---|---|---|
| Raw Materials | 0.50 | 2.48 | 25% | 0.62 | 1.86 |
| Consumables | 2.00 | 1.84 | 25% | 0.46 | 1.38 |
| Finished goods | 0.50 | 4.64 | 25% | 1.16 | 3.48 |
| Debtors | 0.50 | 5.33 | 10% | 0.53 | 4.80 |
| Expenses | 1.00 | 0.30 | 100% | 0.30 | 0.00 |
| | | 14.59 | | 3.07 | 11.52 |

## 5. PROFITABILITY RATIOS BASED ON 80% UTILISATION

| | | | |
|---|---|---|---|
| Profit after Tax / Sales | = | 13.25 / 170.50 | 8% |
| Profit before Interest and Tax / Total Investment | = | 30.87 / 145.09 | 21% |
| Profit after Tax / Promoters Capital | = | 13.25 / 43.57 | 30% |

## 6. BREAK EVEN LEVEL

Fixed Cost (FC):

| | [Rs.lakhs] |
|---|---|
| Wages & Salaries | 21.27 |
| Repairs & Maintenance | 1.45 |
| Depreciation | 13.01 |
| Admin. & General expenses | 6.62 |
| Interest on TL | 9.19 |
| | 51.54 |

Profit Before Tax (P) 20.07

$$BEL = \frac{FC \times \frac{100}{}}{FC + P} = \frac{51.54}{71.61} \times \frac{80}{100} \times 100$$

58% of installed capacity