

PROJECT PROFILE
ON
MICRO CELLULAR RUBBER SHEETS

MONTH & YEAR
JULY 2011

PREPARED BY
TANSTIA – FNF SERVICE CENTRE
B – 22, INDUSTRIAL ESTATE,
GUINDY, CHENNAI – 600 032

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Friedrich Naumann
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MICROCELLULAR RUBBER SHEETS

INTRODUCTION

The use of microcellular soles is becoming very popular because of its wear and tear resistance properties. The units manufacturing these can be ancillary to some large scale footwear manufacturing unit. Though the large scale units do manufacture microcellular sheet, their production usually falls short of their requirements thereby necessitating purchases from outside sources.

MARKET

The demand for micro cellular sheets has been steadily increasing and some of the units producing the sheets are working additional shifts to meet the demand. It has also got good export possibilities, especially to the Middle East and West African Countries.

The Indian rubber industry has been growing in strength and importance, as a part of India's burgeoning role in the global economy. India is the world's largest producer and the third largest consumer of natural rubber and India is also one of the fastest growing economy globally. With a stable annual growth rate of 8-9%, rising foreign exchange reserves, rapid expansion in the capital markets and FDI inflow, India proudly stakes its claim as the second fastest growing major economy in the world. These factors along with high concentration of automobile production and the presence of large and medium industries in South India, Chennai is the perfect place for the event India Rubber Expo-2011.

The Indian Rubber Expo 2011 is a testament to the confidence and relevance of India's largest rubber body the All India Rubber Industries Association AIRIA, the organiser of the India Rubber Expos. AIRIA, established in 1945 is comprised of over 1200 members and is headquartered in Mumbai.

It is considered to be one of the key players in global rubber business. Rapid progress in made in the production of natural rubber. India is home to some of

the world's largest rubber enterprises through direct investment and technical collaboration.

There is no doubt that with rubber consumption stagnating in various Western countries and the shift in consumption of rubber to the Asia Pacific region, the focal country for this decade is India. There exists a huge scope for expansion causing import of machinery, technology, raw materials and export Rubber goods. There are 5000 units comprising 30 large scale, 300 medium scale and around 4600 small scale and tiny sectors in India.

These units are manufacturing more than 35000 rubber products, employing close to four hundred thousand people, which includes technically qualified support personnel's contributing Rs 40 Billion to the National Exchequer.

Natural rubber production in the country rose 3.7 per cent during 2010-11 against the previous year.

Domestic production stood at 8,31,400 tonnes in 2009-10 and 8,61,950 tonnes in 2010-11, as per the Rubber Board. The Rubber Board Chair anticipates the production for 2011-12 was 9,02,000 tonnes. Domestic consumption also increased by 2 per cent in 2010-11.

During 2010-11, growth in tyre production in the automotive sector grew by 23 per cent. Export of tyres also increased by 20 per cent. However, truck and bus tyre exports declined by five per cent.

The projected rubber consumption in 2011-12 is 9,77,000 tonnes.

During 2010-11 fiscal, exports stood at 28,424 tonnes compared with 25,090 tonnes in the previous fiscal. Imports accounted for 1,77,482 tonnes, 73 per cent of which was through duty free channels.

The chairperson said there would not be any shortage as the opening stock of rubber in 2011-12 was relatively high at 2,77,095 tonnes against 2,11,290 tonnes in 2010-11.

According to the International Rubber Study Group report, global rubber production-consumption balance in 2010 and 2011 showed deficits of 380,000 tonnes and 234,000 tonnes, respectively.

INSTALLED CAPACITY

Product	Installed capacity per hour	No of working hours per day	Capacity per day	Capacity per annum 300 days per annum
Micro cellular rubber sheets	31.25 Kgs	16	500 Kgs	150000 Kgs

PLANT & MACHINERY:

Sl. No	Description	Qty	Value
1.	(i) Production machinery, Tools & Equipments consisting of the following : Mixing mill of size 16"x 42" with reduction gear, 60 HP motor & accessories	Whole Plant 1 No	3900000
2.	Mixing mill of size 14" x 36" with reduction gear, 40 HP motor & accessories	1 No	
3.	Hydraulic Press - size 40" x 40" 5 day light-410 tons capacity, with 7.5 HP motor, hydraulic powerpack and accessories	1 No	
4.	Steam Vulcaniser 5ft. dia. and 10 ft.	1 No	
5.	Baby boiler- oil fired 200 Kg/hr steam capacity with all pumps, motors, gauges and accessories	1 No	
6.	Moulds Dies & Accessories		
7.	Miscellaneous tools & equipments		

8.	Weighing scales: Platform type(100 Kg) Single Pan type(10Kg.)Digital type	1 No 1 No	
	(ii) Material handling equipments		90000
	(iii) Testing & Inspection equipments, tools and apparatus		210000
	TOTAL		4200000

MANUFACTURING PROCESS

1. Process Outline

All the rubber chemicals are compounded along with rubber (both natural and synthetic, masticated previously) and measured quantities of the compound is moulded in suitable moulds in a hydraulic press, which is generally of Multi daylight type. After first curing, the sheets may be cured again second time(if required) in vulcanizer under steam pressure. The sheets are taken out and kept under load to avoid deforming while cooling.

RAW MATERIALS

150000

	Qty-kgs	Rate/kg	Value Rs lakhs
Natural Rubber	42000	234.00	98.28
SBR-1958	10080	207.00	20.87
Microcumb	24000	150.00	36.00
Zinc Oxide	2040	120.00	2.45
China Clay	60000	7.00	4.20
Stearic	3600	75.00	2.70

acid

Titanium dioxide	2400	130.00	3.12
Accelerator TMTD	900	158.00	1.42
Antioxidant PBN	600	105.00	0.63
Paraffin wax	720	72.00	0.52
Ethylene glycol	960	105.00	1.01
CI resin	2400	30.00	0.72
Calcium silicate	12000	15.00	1.80
Sulphur	1800	15.00	0.27
Process oil	6000	40.00	2.40
DPT	3600	80.00	2.88
Miscellaneous Chemicals like talc etc			3.60
			182.86
Packing materials	150000	0.75	1.13

LOCATION LAND & BUILDING:

Built up area-Sq.ft	4000
Rent p.m.-Rs per 10 per sq.ft	40000
Advance-10 months. Rs	400000

UTILITIES

POWER & FUEL

Three phase-	KW	75.00	
Power charges Rs.lakhs p.a		19.80	
Fuel-Rs	10000	p.m	1.44
Power & fuel		21.24	
For process-Litres per day		2000	
For human consumption-		200	
litres/day			

MAN POWER

		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

COST OF PRODUCTION AND PROFITABILTY

Assumptions

Installed capacity	150000 Kgs of various Micro cellular rubber sheet per annum
Capacity utilisation	Year-1 -60% Year -2 -70% Year-3 onwards- 80%
Selling price per MT	Rs.2.00 lakhs
Raw materials	As per the details given above
Packing materials	As per details given above
Power & Fuel	Rs.21.24 lakhs per annum at 100%
Wages and salaries	Rs. 19.30 lakhs with increase 5% every year.
Repairs and Maintenance	Rs.0.60 lakh per annum
Depreciation	Written down value method -15 % on

	machinery
Selling general and administrative expenses	Rs.30000 per month
Interest on Term loan	14% per annum
Interest on working capital	14 % per annum
Income tax	34 % on profits

SUPPLIERS OF MACHINERY & EQUIPMENTS

(a) Rubber Processing Machinery

1. M/s. INDIAN EXPELLER WORKS PRIVATE LTD, A-4, Naroda Industrial Estate
Ahmedabad - 382 330
2. M/s. MATHARU ENGINEERING WORKS, Plot No.1, Unit No.4, Opp.
Tatwagyan Vidyapeeth, Ghodbunder Road, Chitalsar, Thane - 400 607
3. M/s. MODERN RUBBER MACHINERY MANUFACTURERS PVT. LTD, 310,
Jogani Industrial Estate, 541, Senapati Bapat Marg, Dadar, Mumbai - 400 028
4. M/s. EMSON INDUSTRIES, 6-A, Shri Ram Industrial Estate, Kaley Marg, Bail
Bazar, Kurla, Mumbai - 400 070
5. M/s. MODERN HYDRAULICS, 5, Italian Building(Ground Floor), 381, Sane
Gruji Marg Agripada, Near I.T.I., Mumbai - 400 011
6. M/s. PERUMACHERIL CASTING INDUSTRIES, Market landing, Kottayam -
686 001, Kerala
7. M/s. HIND HYDRAULICS & ENGINEERS, E-43/1, Okhla Industrial Area
Phase-II New Delhi - 110 0020
8. M/s. MICROMERTICS ENGINEERS (P) LTD, 298, 4th Floor, Khaleel Shiraji
Estate Fountain Plaza, Pantheon Road, Egmore, Chennai - 600 028
9. M/s. ANANT ENGINEERING WORKS, Bassi Road, Sirihind(N.Rly), Punjab -
140 406
10. M/s. SANTOSH INDUSTRIES, A-1, Sone Udyog, Parsi Panchayat Marg
Andheri(East), Mumbai - 400 069

(b) Steam Boilers

1. M/s. THERMAX LTD, 610, Anna Salai, Chennai -600 006
2. M/s. MAXIMA BOILERS PVT LTD, 574/80,Mount Road, Congress building, Teynampet, Chennai-600 006
3. M/s. FIRETECH BOILERS PVT.LTD, No.211, 2nd. Cross, 38th Main, BTM Layout, 2nd. Stage, Bangalore - 560 068
4. M/s. MAXTHERM, K3, Ambattur Industrial Estate, Ambattur, Chennai – 600058
5. M/s. SOUTHERN BOILERS & EQUIPMENTS PVT.LTD, Y-169, Ist. Street Anna Nagar, Chennai- 600 040

(c) Weighing Machines & Balances

1. M/s. GIRI BROTHERS PRIVATE LTD, P.B.No. 1646, No. 51, Rajaji Salai, Chennai - 600 001
2. M/s. TAMILNADU SCALE INDUSTRIES, 166, Broadway, Chennai -600 108

(d) Testing & Measuring Instruments

1. M/s. P.B. SHAH & CO, 182, Linghi Chetty Street, Chennai - 600 001
2. M/s. BLUE STAR LTD, 620, Anna Salai, Chennai - 600 006
3. M/s. MADRAS METALLURGICAL SERVICES, 5, Lalithapuram Street Royapettah, Chennai - 600 014
4. M/s. PRESTO STANTEST PVT. LTD, C-117, F.F. Complex, Okhla Industrial Area New Delhi - 110 020
5. M/s. PROLIFIC ENGINEERS, D-91, Sector -2, Noida -201 301,
6. M/s. A B S INSTRUMENTS PVT. LTD, 22, Electronics Complex, Guindy Chennai - 600 032

(e) All miscellaneous equipments, tools, dies, moulds, fabricated items etc. can be procured from local sources.

SUPPLIERS OF RAW MATERIALS

(a) Rubber

1. M/s. VIRAJ RUBBERS PRIVATE LTD, 2-A, GNT Road, Ponniannanmedu
Madhavaram Post, Chennai - 600 110
2. M/s. SILPRO TRADING CO, 8, Venkataratnam Road, Teynampet, Chennai -
600 018
3. M/s. ARASU RUBBER CORPORATION LTD, 259, Anna Salai, Chennai - 600
006
4. M/s. R.K. POLYMER, 196/5, Govindappa Naicken Street, Chennai - 600 001
5. M/s. AVT RUBBER PRODUCTS LTD, 22, Marshells Road, Egmore, Chennai-
600 008
6. M/s. GOODLUCK RUBBER HOUSE, Apnagar, 103 Marshells Road, Egmore
Chennai- 600 008
7. M/s. KURIAN ABRAHAM LTD, 13/1, 423 M S Road, Parvathipuram, Nagercoil-
629 001
8. M/s. COCHIN MALABAR ESTATES, AND INDS.LTD, 6/117, Race Course Road
Coimbatore- 641 018

(b) Rubber Chemicals

1. M/s. BAYER INDIA LTD, 749, Anna Salai, Chennai - 600 002
2. M/s. NATIONAL ORGANIC CHEMICAL INDUSTRIES LTD, 8, Haddows Road
Chennai - 600 00
3. M/s. A.V. THOMAS & CO (INDIA) LTD, 22, Marshalls Road, Egmore, Chennai -
600 008
4. M/s. DUJODWALA INDUSTRIES, 43, Armenian Street, Chennai - 600 001
5. M/s. BHARAT CARBON INDUSTRIES, 43, Buxipur Industrial Area, Gorakhpur -273
001, U.P.
6. M/s. RUBO-CHEM INDUSTRIES (P) LTD, 403/404, Laxmi Commercial
Complex Senapati Bapat Marg, Mumbai - 400 028
7. M/s. I.C.I. INDIA LTD, Rubber Chemicals Divn., 149, Montieth Road, Chennai
- 600 008

8. M/s. MONSANTO CHEMICALS OF INDIA LTD, F-4, Third Phase, Thiru Vi Ka Industrial Estate, Chennai - 600 097
9. M/s. PHILIPS CARBON BLACK LTD, 22, Marshalls Road, Egmore, Chennai - 600 008
10. M/s. R.K. POLYMER, 196/5, Govindappa Naicken Street, Chennai - 600 001
11. M/s. SOUTH INDIA RUBBER & CHEMICALS, C-4, Ram Square, No.2, Village Road Nungambakkam, Chennai - 600 034
12. M/s. MANICKAVELU CORPORATION, Plot No. W-300, 19th Street, Sector -C Anna Nagar western Extn, Chennai - 600 101

(c) Miscellaneous Items

All other miscellaneous items can be easily procured from the market sources.

FINANCIAL ASPECTS

1. COST OF PROJECT

	[Rs.lakhs]
Land & Building (Advance)	4.00
Plant & Machinery	42.00
Other Misc. assets	2.00
Pre-Operative expenses	4.00
Margin for WC	3.78
	<u>55.78</u>

2. MEANS OF FINANCE

Capital	24.28
Term Loan	31.50
	<u>55.78</u>

3. COST OF PRODUCTION & PROFITABILITY STATEMENT

	[Rs.lakhs]				
Years	1	2	3	4	5
Installed Capacity-MTs	150	150	150	150	150
Utilisation	60%	70%	80%	80%	80%
Production/Sales-MTs	90	105	120	120	120
Selling Price per MT -Rs.	2.00				
Sales Value (Rs.lakhs)	180.00	210.00	240.00	240.00	240.00
Raw Materials	109.72	128.00	146.29	146.29	146.29
Packing Materials	0.68	0.79	0.90	0.90	0.90
Power& fuel	12.74	14.87	16.99	16.99	16.99
Wages & Salaries	19.30	20.26	21.27	22.33	23.45
Repairs & Maintenance	0.60	0.66	0.73	0.80	0.88
Depreciation	6.30	5.36	4.55	3.87	3.29
Cost of Production	149.34	169.94	190.73	191.18	191.80
Selling, Admin, & General exp	3.60	3.78	3.97	4.17	4.38
Interest on Term Loan	4.41	3.86	2.76	1.65	0.55
Interest on Working Capital	2.09	2.09	2.09	2.09	2.09

Total	159.44	179.67	199.55	199.09	198.82
Profit Before Tax	20.56	30.34	40.45	40.91	41.18
Provision for tax	6.92	10.21	13.61	13.77	13.86
Profit After Tax	13.64	20.13	26.84	27.14	27.32
Add: Depreciation	6.30	5.36	4.55	3.87	3.29
Cash Accruals	19.94	25.48	31.39	31.01	30.61
Repayment of Term loan	0.00	7.88	7.88	7.88	7.86

4. WORKING CAPITAL:

	Months Consumptions	Values	%	Margin Amount	Bank Finance
Raw Materials	0.50	4.57	25%	1.14	3.43
Consumables	2.00	0.11	25%	0.03	0.08
Finished goods	0.50	6.22	25%	1.56	4.66
Debtors	0.50	7.50	10%	0.75	6.75
Expenses	1.00	0.30	100%	0.30	0.00
		<u>18.70</u>		<u>3.78</u>	<u>14.92</u>

5. PROFITABILITY RATIOS BASED ON 80% UTILISATION

$$\frac{\text{Profit after Tax}}{\text{Sales}} = \frac{26.84}{240.00} \quad 11\%$$

$$\frac{\text{Profit before Interest and Tax}}{\text{Total Investment}} = \frac{45.30}{70.70} \quad 64\%$$

$$\frac{\text{Profit after Tax}}{\text{Promoters Capital}} = \frac{26.84}{24.28} \quad 111\%$$

6. BREAK EVEN LEVEL

Fixed Cost (FC):

	[Rs.lakhs]
Wages & Salaries	21.27
Repairs & Maintenance	0.73
Depreciation	4.55
Admin. & General expenses	3.97
Interest on TL	2.76
	<u>33.28</u>

Profit Before Tax (P) 40.45

$$\text{BEL} = \frac{\text{FC} \times 100}{\text{FC} + \text{P}} = \frac{33.28}{73.73} \times \frac{80}{100} \times 100$$

36% of installed capacity