

C. RECOMMENDATIONS

9 High potential product-to-market opportunities based on trade flow analysis

In order to identify high-potential product-to-market combinations a multiple ranking analysis of the following demand side factors was conducted:

- ▶ **Import market size - Imported value 2003 in US\$ thousand**
- ▶ **Import market size adjusted for intra-EU/intra-NAFTA trade - Ex EU / NAFTA Imported value 2003 in US\$ thousand**
- ▶ **Import market growth - Import trend in value 1999-2003, %, p.a.**

An additional ranking criterion that was considered for ranking product-to-market combinations was the **relative labour intensity** of the various PP product categories. The labour intensity of PP production is affected by various factors including:

- ▶ Process used in production, e.g. extrusion as opposed to injection moulding
- ▶ Product type - within each product category there may be large differences in the degree of labour intensity
- ▶ Size of plant
- ▶ Capital intensity of plant – this is dependent on whether old or new equipment is in use, where most new equipment is fully automated

As the brief was to conduct trade flow analysis and not a detailed analysis of the current and future structure of the South African PP industry, it has not been possible to collect the necessary information on the above drivers of labour intensity that would be required to estimate the labour intensities of the product groupings. However, based on input from socio-economic impact specialists⁹⁰ and industry players⁹¹, PP products can be ranked on a rough indicative basis in terms of labour intensity, as follows, from least-dependent to most-dependant on labour:

1. Polypropylene in primary form
2. PP Copolymers
3. Staple fibres of PP
4. Tubes, Pipes and Hoses
5. Binder or Baler twine
6. Plates, sheet or film
7. Sacks and Bags
8. Twine, cordage, ropes and cable

⁹⁰ Global Insight

⁹¹ In particular, Sasol Polymers and Sasol polypropylene division

It is evident that the production of primary PP products is, in general, less labour intensive than the production of secondary PP products, although both primary and secondary polypropylene products are relatively capital intensive compared to many other sectors. Employment growth is therefore likely to be generated by creating new downstream activity and selecting sufficiently large-scale opportunities that can absorb labour. Therefore, labour intensity has not been added as an additional ranking criterion; it is rather recommended that it is considered during the design phase of new plants that might be developed to realise these market opportunities, in order to address the joint objectives of competitiveness, growth, employment and equity.

The ranking tables based on single and then combined criteria are presented below.

9.1 Top 30 PP product-to-market combinations based on import market size (US\$ '000 – 2003)

Rank	Product	Market	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
1	390210 Polypropylene	Italy	643,218	35,233	4	152	0.02%	0%
2	390210 Polypropylene	Belgium	549,516	40,763	17	69	0.01%	0%
3	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	US	511,148	288,760	6	0	0.00%	0%
4	390210 Polypropylene	Germany	491,495	27,245	6	2,201	0.45%	3%
5	390230 Propylene copolymers	Germany	479,712	11,726	9	0	0.00%	0%
6	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	UK	430,790	22,186	16	0	0.00%	0%
7	390210 Polypropylene	France	337,696	1,513	10	37	0.01%	0%
8	390230 Propylene copolymers	France	313,154	25,501	9	97	0.03%	0%
9	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Germany	309,807	37,028	10	0	0.00%	0%

Rank	Product	Market	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
10	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Belgium	284,900	45,586	10	0	0.00%	0%
11	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	France	280,460	25,220	9	63	0.02%	2%
12	390230 Propylene copolymers	UK	263,344	5,225	9	16	0.01%	0%
13	390210 Polypropylene	UK	258,261	39,504	16	453	0.18%	1%
14	390230 Propylene copolymers	Italy	237,593	1,649	1	0	0.00%	0%
15	390210 Polypropylene	Spain	221,756	18,153	27	100	0.05%	0%
16	390230 Propylene copolymers	Belgium	215,983	17,946	6	137	0.06%	1%
17	390230 Propylene copolymers	Spain	203,096	4,331	23	81	0.04%	0%
18	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Italy	193,999	22,313	6	0	0.00%	0%
19	390210 Polypropylene	Denmark	177,396	10,306	16		0.00%	
20	390210 Polypropylene	US	170,779	33,290	4		0.00%	
21	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Spain	170,166	9,823	10	0	0.00%	0%
22	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Netherlands	162,650	23,558	11	0	0.00%	0%
23	390210 Polypropylene	Netherlands	161,581	18,768	12		0.00%	
24	390230 Propylene copolymers	US	142,133	64,140	7	0	0.00%	0%
25	630533 Sacks, bags, packing, of strip plastic material	US	107,556	69,313	6	0	0.00%	0%
26	390230 Propylene copolymers	Netherlands	86,615	4,886	26		0.00%	

Rank	Product	Market	Imported value 2003 in US\$ thousand	Ex EU / NAFTA Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
27	390210 Polypropylene	Sweden	80,221	16,497	14		0.00%	
28	390210 Polypropylene	Portugal	79,586	6,344	7	17	0.02%	0%
29	550340 Staple fibres of polypropylene, not carded or combed	Germany	77,585	3,221	1	592	0.76%	37%
30	390210 Polypropylene	Austria	75,166	991	9	16	0.02%	0%

9.2 Top 30 PP product-to-market combinations based on import market size Ex-EU / NAFTA (US\$ '000 – 2003)

Rank	Product	Market	Imported value 2003 in US\$ thousand	Ex EU / NAFTA Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
1	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	US	288,760	511,148	6	0	0.00%	0%
2	630533 Sacks, bags, packing, of strip plastic material	US	69,313	107,556	6	0	0.00%	0%
3	390230 Propylene copolymers	US	64,140	142,133	7	0	0.00%	0%
4	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Belgium	45,586	284,900	10	0	0.00%	0%
5	390210 Polypropylene	Belgium	40,763	549,516	17	69	0.01%	0%
6	390210 Polypropylene	UK	39,504	258,261	16	453	0.18%	1%
7	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Germany	37,028	309,807	10	0	0.00%	0%
8	390210 Polypropylene	Italy	35,233	643,218	4	152	0.02%	0%

Rank	Product	Market	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
9	390210 Polypropylene	US	33,290	170,779	4		0.00%	
10	390210 Polypropylene	Germany	27,245	491,495	6	2,201	0.45%	3%
11	390230 Propylene copolymers	France	25,501	313,154	9	97	0.03%	0%
12	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	France	25,220	280,460	9	63	0.02%	2%
13	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Netherlands	23,558	162,650	11	0	0.00%	0%
14	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Italy	22,313	193,999	6	0	0.00%	0%
15	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	UK	22,186	430,790	16	0	0.00%	0%
16	630533 Sacks, bags, packing, of strip plastic material	Germany	20,551	29,077	19	0	0.00%	0%
17	560749 Twine nes, cordage, ropes and cables, of polyethylene or polypropylene	US	19,360	41,180	13	0	0.00%	0%
18	390210 Polypropylene	Netherlands	18,768	161,581	12		0.00%	
19	390210 Polypropylene	Spain	18,153	221,756	27	100	0.05%	0%
20	390230 Propylene copolymers	Belgium	17,946	215,983	6	137	0.06%	1%
21	390210 Polypropylene	Sweden	16,497	80,221	14		0.00%	
22	630533 Sacks, bags, packing, of strip plastic material	Italy	14,648	18,264	7	0	0.00%	0%
23	560741 Binder or baler twine, of polyethylene or polypropylene	US	14,465	18,975	7	0	0.00%	0%
24	390230 Propylene copolymers	Germany	11,726	479,712	9	0	0.00%	0%
25	630533 Sacks, bags, packing, of strip plastic material	Belgium	11,418	15,183	10	0	0.00%	0%

Rank	Product	Market	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
26	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Ireland	10,321	46,641	11		0.00%	
27	390210 Polypropylene	Denmark	10,306	177,396	16		0.00%	
28	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Spain	9,823	170,166	10	0	0.00%	0%
29	630533 Sacks, bags, packing, of strip plastic material	UK	9,676	12,935	-9		0.00%	
30	630533 Sacks, bags, packing, of strip plastic material	Netherlands	8,727	18,756	4	0	0.00%	0%

9.3 Top 30 PP product-to-market combinations based on import market growth (1999 – 2003)

Rank	Product	Market	Import trend in value between 1999-2003, %, p.a.	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
1	630533 Sacks, bags, packing, of strip plastic material	Luxembourg	100	2,914	2,518		0.00%	
2	560741 Binder or baler twine, of polyethylene or polypropylene	Greece	59	608	336		0.00%	
3	391722 Tubes, pipes and hoses, rigid; of polypropylene	Finland	44	5,049	170		0.00%	
4	560741 Binder or baler twine, of polyethylene or polypropylene	Portugal	41	115	0		0.00%	

Rank	Product	Market	Import trend in value between 1999-2003, % p.a.	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
5	391722 Tubes, pipes and hoses, rigid; of polypropylene	Ireland	40	3,653	2,369		0.00%	
6	630533 Sacks, bags, packing, of strip plastic material	Austria	37	3,766	229		0.00%	
7	391722 Tubes, pipes and hoses, rigid; of polypropylene	UK	34	11,627	4,652	0	0.00%	0%
8	630533 Sacks, bags, packing, of strip plastic material	Portugal	32	4,223	397		0.00%	
9	390230 Propylene copolymers	Austria	31	47,350	267		0.00%	
10	390230 Propylene copolymers	Finland	28	16,635	657		0.00%	
11	390210 Polypropylene	Luxembourg	27	35,905	0		0.00%	
12	390210 Polypropylene	Spain	27	221,756	18,153	100	0.05%	0%
13	391722 Tubes, pipes and hoses, rigid; of polypropylene	Belgium	27	9,236	4,887	0	0.00%	0%
14	390230 Propylene copolymers	Netherlands	26	86,615	4,886		0.00%	
15	550340 Staple fibres of polypropylene, not carded or combed	Ireland	26	190	51		0.00%	
16	390230 Propylene copolymers	Spain	23	203,096	4,331	81	0.04%	0%
17	391722 Tubes, pipes and hoses, rigid; of polypropylene	Spain	22	27,267	755	0	0.00%	0%
18	390230 Propylene copolymers	Denmark	21	34,960	1,124		0.00%	
19	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Luxembourg	20	31,271	0		0.00%	
20	390230 Propylene copolymers	Luxembourg	19	4,974	0		0.00%	
21	550340 Staple fibres of polypropylene, not carded or combed	Greece	19	1,360	0		0.00%	

Rank	Product	Market	Import trend in value between 1999-2003, %, p.a.	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
22	560749 Twine nes, cordage, ropes and cables, of polyethylene or polypropylene	Belgium	19	6,693	45		0.00%	
23	630533 Sacks, bags, packing, of strip plastic material	Germany	19	29,077	20,551	0	0.00%	0%
24	550340 Staple fibres of polypropylene, not carded or combed	Spain	18	21,053	366	0	0.00%	0%
25	390210 Polypropylene	Belgium	17	549,516	40,763	69	0.01%	0%
26	560749 Twine nes, cordage, ropes and cables, of polyethylene or polypropylene	Portugal	17	1,616	62		0.00%	
27	392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Denmark	17	3,901	3,090		0.00%	
28	630533 Sacks, bags, packing, of strip plastic material	Denmark	17	3,901	2,013		0.00%	
29	390210 Polypropylene	Denmark	16	177,396	10,306		0.00%	
30	390210 Polypropylene	UK	16	258,261	39,504	453	0.18%	1%

9.4 Top 30 product-to-market opportunities for PP based on trade flow analysis

Product	Market	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
390210 Polypropylene	Spain	221,756	18,153	27	100	0.05%	0%
390210 Polypropylene	Denmark	177,396	10,306	16		0.00%	
390210 Polypropylene	Belgium	549,516	40,763	17	69	0.01%	0%

Product	Market	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
390210 Polypropylene	UK	258,261	39,504	16	453	0.18%	1%
392020 Film and sheet etc, non-cellular etc, of polymers of propylene	US	511,148	288,760	6	0	0.00%	0%
392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Belgium	284,900	45,586	10	0	0.00%	0%
392020 Film and sheet etc, non-cellular etc, of polymers of propylene	Germany	309,807	37,028	10	0	0.00%	0%
390210 Polypropylene	Italy	643,218	35,233	4	152	0.02%	0%
390210 Polypropylene	Germany	491,495	27,245	6	2,201	0.45%	3%
390230 Propylene copolymers	France	313,154	25,501	9	97	0.03%	0%
392020 Film and sheet etc, non-cellular etc, of polymers of propylene	France	280,460	25,220	9	63	0.02%	2%
392020 Film and sheet etc, non-cellular etc, of polymers of propylene	UK	430,790	22,186	16	0	0.00%	0%

Please note that the product-to-market opportunities in the darker cells represent the highest potential opportunities based on the three selected demand side ranking criteria. These combinations score highly on all three criteria.

The product-to-market combinations in the paler cells represent high potential opportunities – they score highly on two of the three ranking criteria (i.e. within the top 15 in terms of total import market size, within the top 15 in terms of total import market size adjusted for intra-EU/intra-NAFTA trade, and/or top 30 in import market growth terms).

9.5 Top 30 nonwovens product-to-market combinations based on import market size (US\$ '000 – 2003)

Rank	Product	Market	Imported value 2003 in US\$ thousand	Ex EU/NAFTA Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
1	392190 Film and sheet etc, nes of plastics	US	578,250	403,441	5	1324	0%	11
2	392190 Film and sheet etc, nes of plastics	France	432,542	68,210	4	264	0%	2
3	392190 Film and sheet etc, nes of plastics	Germany	405,597	138,430	0	40	0%	0
4	392190 Film and sheet etc, nes of plastics	UK	363,163	74,639	3	612	0%	5
5	392190 Film and sheet etc, nes of plastics	Spain	208,831	16,341	11	0	0%	0
6	392190 Film and sheet etc, nes of plastics	Italy	203,180	33,979	0	0	0%	0
7	392190 Film and sheet etc, nes of plastics	Belgium	193,910	23,364	5	68	0%	1
8	560312 Nonwovens, man-made filaments weighing 25-70g/m2	UK	177,389	47,755	12	0	0%	0
9	392190 Film and sheet etc, nes of plastics	Netherlands	175,662	22,898	1	2482	1%	20
10	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Germany	134,661	26,457	10	0	0%	0
11	560312 Nonwovens, man-made filaments weighing 25-70g/m2	US	120,126	100,291	17	0	0%	0
12	560311 Nonwovens, man-made filaments weighing <25g/m2	US	119,902	104,755	17	0	0%	0
13	392190 Film and sheet etc, nes of plastics	Austria	117,151	28,953	7	0	0%	0

Rank	Product	Market	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
14	560314 Nonwovens, man-made filaments weighing >150g/m2	Germany	113,654	21,105	0	63	0%	7
15	560311 Nonwovens, man-made filaments weighing <25g/m2	Germany	95,333	7,968	12	91	0%	51
16	392190 Film and sheet etc, nes of plastics	Sweden	82,599	10,652	3	823	1%	7
17	392190 Film and sheet etc, nes of plastics	Denmark	78,336	6,931	5	0	0%	0
18	560313 Nonwovens, man-made filaments weighing 70-150g/m2	US	74,456	61,504	25	273	0%	2
19	560311 Nonwovens, man-made filaments weighing <25g/m2	France	73,015	9,975	4	0	0%	0
20	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Belgium	72,971	39,866	1	149	0%	4
21	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Spain	69,419	2,883	37	1686	2%	51
22	560314 Nonwovens, man-made filaments weighing >150g/m2	France	69,161	6,054	7	0	0%	0
23	560313 Nonwovens, man-made filaments weighing 70-150g/m2	Germany	67,814	12,857	-5	245	0%	2
24	560312 Nonwovens, man-made filaments weighing 25-70g/m2	France	60,741	8,855	-1	0	0%	0
25	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Italy	57,705	14,664	9	0	0%	0
26	560314 Nonwovens, man-made filaments weighing >150g/m2	US	54,087	47,348	3	28	0%	3
27	560311 Nonwovens, man-made filaments weighing <25g/m2	Spain	54,018	1,777	8	0	0%	0

Rank	Product	Market	Imported value 2003 in US\$ thousand	Ex EU / NAFTA Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
28	560311 Nonwovens, man-made filaments weighing <25g/m2	Netherlands	51,917	3,715	10	0	0%	0
29	560314 Nonwovens, man-made filaments weighing >150g/m2	Italy	49,046	15,235	-1	0	0%	0
30	560313 Nonwovens, man-made filaments weighing 70-150g/m2	UK	47,457	47,444	-2	3638	8%	28

9.6 Top 30 nonwovens product-to-market combinations based on import market size Ex-EU / NAFTA (US\$ '000 – 2003)

Rank	Product	Market	Ex EU / NAFTA Imported value 2003 in US\$ thousand	Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
1	392190 Film and sheet etc, nes of plastics	US	403,441	578,250	5	1324	0%	11
2	392190 Film and sheet etc, nes of plastics	Germany	138,430	405,597	0	40	0%	0
3	560311 Nonwovens, man-made filaments weighing <25g/m2	US	104,755	119,902	17	0	0%	0
4	560312 Nonwovens, man-made filaments weighing 25-70g/m2	US	100,291	120,126	17	0	0%	0
5	392190 Film and sheet etc, nes of plastics	UK	74,639	363,163	3	612	0%	5

Rank	Product	Market	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
6	392190 Film and sheet etc, nes of plastics	France	68,210	432,542	4	264	0%	2
7	560313 Nonwovens, man-made filaments weighing 70-150g/m2	US	61,504	74,456	25	273	0%	2
8	560312 Nonwovens, man-made filaments weighing 25-70g/m2	UK	47,755	177,389	12	0	0%	0
9	560313 Nonwovens, man-made filaments weighing 70-150g/m2	UK	47,444	47,457	-2	3638	8%	28
10	560314 Nonwovens, man-made filaments weighing >150g/m2	US	47,348	54,087	3	28	0%	3
11	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Belgium	39,866	72,971	1	149	0%	4
12	392190 Film and sheet etc, nes of plastics	Italy	33,979	203,180	0	0	0%	0
13	392190 Film and sheet etc, nes of plastics	Austria	28,953	117,151	7	0	0%	0
14	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Germany	26,457	134,661	10	0	0%	0
15	392190 Film and sheet etc, nes of plastics	Belgium	23,364	193,910	5	68	0%	1
16	392190 Film and sheet etc, nes of plastics	Netherlands	22,898	175,662	1	2482	1%	20
17	560314 Nonwovens, man-made filaments weighing >150g/m2	Germany	21,105	113,654	0	63	0%	7
18	560313 Nonwovens, man-made filaments weighing 70-150g/m2	Belgium	19,797	33,217	-6	6584	20%	50
19	560314 Nonwovens, man-made filaments weighing >150g/m2	Belgium	19,679	42,311	7	0	0%	0

Rank	Product	Market	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
20	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Netherlands	17,061	30,735	10	0	0%	0
21	392190 Film and sheet etc, nes of plastics	Spain	16,341	208,831	11	0	0%	0
22	560314 Nonwovens, man-made filaments weighing >150g/m2	Italy	15,235	49,046	-1	0	0%	0
23	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Italy	14,664	57,705	9	0	0%	0
24	560313 Nonwovens, man-made filaments weighing 70-150g/m2	Germany	12,857	67,814	-5	245	0%	2
25	560311 Nonwovens, man-made filaments weighing <25g/m2	UK	11,696	36,259	-3	0	0%	0
26	392190 Film and sheet etc, nes of plastics	Sweden	10,652	82,599	3	823	1%	7
27	560311 Nonwovens, man-made filaments weighing <25g/m2	France	9,975	73,015	4	0	0%	
28	392190 Film and sheet etc, nes of plastics	Greece	9,546	36,764	7	92	0%	1
29	560312 Nonwovens, man-made filaments weighing 25-70g/m2	France	8,855	60,741	-1	0	0%	0
30	560314 Nonwovens, man-made filaments weighing >150g/m2	Denmark	8,533	20,436	10	0	0%	0

9.7 Top 30 nonwovens product-to-market combinations based on import market growth (1999 – 2003)

Rank	Product	Market	Import trend in value between 1999-2003, % p.a.	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
1	560314 Nonwovens, man-made filaments weighing >150g/m2	Luxembourg	50	851	302	0	0%	0
2	560314 Nonwovens, man-made filaments weighing >150g/m2	Ireland	49	2,457	40	0	0%	0
3	560313 Nonwovens, man-made filaments weighing 70-150g/m2	Greece	45	12,490	2	0	0%	0
4	560313 Nonwovens, man-made filaments weighing 70-150g/m2	Luxembourg	40	7,555	4,388	0	0%	0
5	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Spain	37	69,419	2,883	1686	2%	51
6	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Denmark	34	8,736	1,593	0	0%	0
7	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Sweden	31	10,381	357	0	0%	0
8	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Finland	26	9,969	2,317	0	0%	0
9	560313 Nonwovens, man-made filaments weighing 70-150g/m2	US	25	74,456	61,504	273	0%	2
10	560313 Nonwovens, man-made filaments weighing 70-150g/m2	Ireland	23	3,262	158	0	0%	0
11	560311 Nonwovens, man-made filaments weighing <25g/m2	Belgium	20	33,356	5,723	0	0%	0
12	560314 Nonwovens, man-made filaments weighing >150g/m2	Austria	19	35,294	3,910	0	0%	0
13	560313 Nonwovens, man-made filaments weighing 70-150g/m2	Austria	18	20,017	2,451	0	0%	0

Rank	Product	Market	Import trend in value between 1999-2003, % p.a.	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
14	560313 Nonwovens, man-made filaments weighing 70-150g/m2	Denmark	18	11,157	192	0	0%	0
15	560311 Nonwovens, man-made filaments weighing <25g/m2	US	17	119,902	104,755	0	0%	0
16	560312 Nonwovens, man-made filaments weighing 25-70g/m2	US	17	120,126	100,291	0	0%	0
17	560311 Nonwovens, man-made filaments weighing <25g/m2	Germany	12	95,333	7,968	91	0%	51
18	560312 Nonwovens, man-made filaments weighing 25-70g/m2	UK	12	177,389	47,755	0	0%	0
19	560313 Nonwovens, man-made filaments weighing 70-150g/m2	Spain	12	19,201	1,315	420	2%	3
20	392190 Film and sheet etc, nes of plastics	Ireland	11	43,850	4,048	135	0%	1
21	392190 Film and sheet etc, nes of plastics	Spain	11	208,831	16,341	0	0%	0
22	560311 Nonwovens, man-made filaments weighing <25g/m2	Netherlands	10	51,917	3,715	0	0%	0
23	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Germany	10	134,661	26,457	0	0%	0
24	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Netherlands	10	30,735	17,061	0	0%	0
25	560314 Nonwovens, man-made filaments weighing >150g/m2	Denmark	10	20,436	8,533	0	0%	0
26	560311 Nonwovens, man-made filaments weighing <25g/m2	Luxembourg	9	374	21	0	0%	0
27	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Greece	9	2,633	232	0	0%	0

Rank	Product	Market	Import trend in value between 1999-2003, %, p.a.	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
28	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Ireland	9	3,127	880	0	0%	0
29	560312 Nonwovens, man-made filaments weighing 25-70g/m2	Italy	9	57,705	14,664	0	0%	0
30	560313 Nonwovens, man-made filaments weighing 70-150g/m2	Finland	9	9,701	191	14	0%	0

9.8 Top 30 nonwovens product-to-market opportunities based on trade flow analysis

Product	Market	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
560311 Nonwovens, man-made filaments weighing <25g/m2	US	119,902	104,755	17	0	0%	0
560312 Nonwovens, man-made filaments weighing 25-70g/m2	US	120,126	100,291	17	0	0%	0
560312 Nonwovens, man-made filaments weighing 25-70g/m2	UK	177,389	47,755	12	0	0%	0
560313 Nonwovens, man-made filaments weighing 70-150g/m2	US	74,456	61,504	25	273	0%	2
392190 Film and sheet etc, nes of plastics	US	578,250	403,441	5	1324	0%	11

Product	Market	Imported value 2003 in US\$ thousand	Ex EU/ NAFTA Imported value 2003 in US\$ thousand	Import trend in value between 1999-2003, %, p.a.	SA Exported value 2003 in US\$ thousand	SA % share of market value	% of South Africa's exports of the product
392190 Film and sheet etc, nes of plastics	Germany	405,597	138,430	0	40	0%	0
392190 Film and sheet etc, nes of plastics	France	432,542	68,210	4	264	0%	2
392190 Film and sheet etc, nes of plastics	UK	363,163	74,639	3	612	0%	5
392190 Film and sheet etc, nes of plastics	Italy	203,180	33,979	0	0	0%	0
392190 Film and sheet etc, nes of plastics	Belgium	193,910	23,364	5	68	0%	1
392190 Film and sheet etc, nes of plastics	Austria	117,151	28,953	7	0	0%	0
560312 Nonwovens, man-made filaments weighing 25-70g/m2	Germany	134,661	26,457	10	0	0%	0
392190 Film and sheet etc, nes of plastics	Spain	208,831	16,341	11	0	0%	0
560312 Nonwovens, man-made filaments weighing 25-70g/m2	Spain	69,419	2,883	37	1686	2%	51
560311 Nonwovens, man-made filaments weighing <25g/m2	Germany	95,333	7,968	12	91	0%	51
560312 Nonwovens, man-made filaments weighing 25-70g/m2	Italy	57,705	14,664	9	0	0%	0

Please note that the product-to-market opportunities in the darker cells represent the highest potential opportunities based on the three selected demand side ranking criteria. These combinations score highly on all three criteria.

The product-to-market combinations in the paler cells represent high potential opportunities – they score highly on two of the three ranking criteria (i.e. within the top 15 in terms of total import market size, within the top 15 in terms of total import market size adjusted for intra-EU/intra-NAFTA trade, and/or top 30 in import market growth terms).

10 Opportunities based on market trends analysis and stakeholder interviews

Market research additional to trade flow analysis was conducted to investigate the opportunities in the downstream segment of the market and areas that could not be addressed by trade flow analysis. Due to its increasing performance characteristics PP can be used in a vast array of applications. Further, its lower cost is driving increasing substitution of other plastics. In particular, PP is replacing high-density polyethylene (PE), engineering plastics, and polystyrene in many applications. A review of market research literature has shown that there are potential areas for growth in PP demand in packaging, building and construction, and automotive applications. Although this review is not exhaustive, it gives an additional indication of where attractive market opportunities may be.

Packaging

In the US and many of the European markets the packaging industry is the largest end-user of PP resins and plastic materials. In particular, PP film is used in a wide range of packaging applications, including food and cigarettes packaging. However, there are also opportunities for PP foams in this market.

Potential opportunities include:

- ▶ Flexible packaging
 - Oriented PP films for snack and confectionary packaging; and non-oriented PP films which are used for textile products, confectionery, and fish and meat product packaging.
 - PP is substituting PE and foil use and there is a trend away from rigid packaging materials. PP is showing strong growth rates in the target markets.
 - Best potential opportunities are in the food packaging markets – especially snack foods and baked goods.
- ▶ Caps and closures
 - PP is increasingly used for threaded plastic pressurised caps due to its competitive price and performance characteristics (i.e. it moulds well to the threaded bottle neck)
- ▶ Plastic containers
 - PP is one of the fastest growing resins for plastic containers substituting high-density polyethylene. However, PP use is still low volume in comparison to high-density polyethylene and polyethylene terephthalate (PET).
 - Growth opportunities are driven by demand for bottled water and for single-serving containers for beverage and food items.
- ▶ Protective packaging
 - There are growth opportunities for polyolefin foams in this market due to their scratch protection and cushioning capabilities.
- ▶ Sterile medical packaging
 - Plastics dominate sterile medical packaging; however paper/paperboard, glass, metal and other materials will continue to be important. Packaging products are often made from a combination of materials such as plastics, nonwovens, foils and paper to provide a cost-effective solution to packaging problems.
 - Growing demand is driven by an increase in surgical procedures and diagnostic testing.

Personal hygiene and medical

Market research has shown that 36% of nonwovens are made from PP, and that PP and PET have increasingly substituted in the nonwoven industry⁹². Disposable personal hygiene and medical fabrics are key applications for non-wovens accounting for around 33% of demand in Europe and 24% in the US. Potential opportunities for PP products in this sector include:

- ▶ Disposable nonwovens
 - There is strong growth in nonwoven personal protection goods, especially adult diapers and shields.
- ▶ Spunbonded nonwoven fabrics
 - Applications include hygiene cover stock and medical fabrics, disposable protective apparel, and fabric softener dryer sheets (as well as a range of industrial and automotive applications).
 - Polypropylene is the most widely used polymer for the production of spunbonded nonwovens because it provides the highest amount of fibre per unit of weight and the highest level of opacity, as well as the lowest cost due to its low density.
- ▶ Carded nonwovens
 - Historically, polyester was the material most commonly used to produce carded nonwovens.
 - However, there is an increasing use of carded webs for hygiene coverstock and wipes. For these products, polypropylene has become the raw material most often used.
- ▶ Surgical drapes

Automotive

Market research conducted indicates that this sector has strong growth potential for PP products including foam and fibres. Growth in PP demand has been identified for the following applications:

- ▶ Step/running boards have been identified as a growth area for long glass PP
- ▶ Headliner energy absorbers are identified as a growth area for EPP bead foams due to in-mould skin/foam lamination technology
- ▶ Sun visors are another growth area for EPP application due to multidensity-part integration
- ▶ PP is being used increasingly in the production of automotive exteriors such as bumper facia,⁹³ fender liners, trim and front wings
- ▶ European End of Life Vehicle (ELV) legislation is driving mono-materials constructions and this will encourage the use of polyolefin nonwovens (PO-NWs) in constructions with PO-foams and PP substrates⁹⁴
- ▶ Nonwovens are gaining momentum in the automotive marketplace either as a direct substitute for wovens and knits currently used in face fabrics or as layers in the construction of most interior modules. For example, spunbonded nonwoven fabrics are used for motor vehicle headliners, trunk liners and carpet backing. New nonwoven applications are emerging in headliners, luxury fabrics and floor/acoustic modules.

However, the barriers to entry into this market are very high. Supply contracts are managed by the vehicle OEM's preferred suppliers - Tier 1 and Tier 2 suppliers in particular – who provide the OEMs with finished automotive components and automotive parts. They in turn contract out the manufacture to a network of suppliers. The market is highly competitive and

⁹² http://www.agr.gc.ca/misb/spcrops/sc-cs_e.php?page=textiles

⁹³ <http://www.riotinto.com/media/downloads/speeches/1M%20Forum%20presentation%20Nov%2004.pdf>

⁹⁴ <http://www.robertellerassoc.com/articles/techtex04.pdf>

contracts are awarded to suppliers who can meet delivery at a competitive price and quality. In order to be competitive significant economies of scale are typically required.

Countries who compete in this market are Brazil, Slovakia, Slovenia and Korea. And while South Africa might have the capacity to take advantage of demand in terms of technology and market contacts, a key inhibiting factor to local industry is import parity pricing where local downstream producers cannot compete with cheap imports. Also, while the domestic vehicle manufacturing output is increasing as major automotive producers such as Toyota and Mercedes Benz in South Africa raise their production goals, the production runs tend to be too short to warrant a major Tier 1 or Tier 2 supplier to set up in South Africa and source plastics locally.

Appendix A: US and EU demand statistics 2003

Appendix B: South African supply statistics 2003

Appendix C: World demand and supply statistics 2003

(Excel Data books)