POLYPROPYLENE BENEFICIATION
INVESTMENT MARKETING DOCUMENT

FINAL

Guide to this document

"Investing in Polypropylene beneficiation in South Africa" is an output of the Fund for Research into Industrial Development, Growth and Equity (FRIDGE) Polypropylene (PP) beneficiation investment project. The primary purpose is to **highlight advantages and opportunities** of investing or expanding investment in South Africa, in particular export-oriented activity. Secondarily, the document aims to provide **supplementary information on South Africa's investment environment** (directly or through links or references).

The document has therefore been structured as follows:

- Brief introductory section
- Core section highlighting the main advantages and opportunities of investing in South Africa
- Investor testimonials (to demonstrate how these advantages and opportunities have resulted in successful investment)
- Contact details of investment facilitation and industry support entities

Explanatory boxes (**shaded in green**, such as this one), which are not part of the content of the document, have been used throughout the document to indicate:

- Areas where information may need to be updated
- Comments on design of the document
- Areas where supplementary information is to be provided through:
  - "Fact boxes" or inserts in the case of a hard copy brochure
  - Links or expandable text in the case of an electronic document or web content

<u>Please note that these green boxes should therefore not be included in a final published version.</u>

This document has been used as the basis for a 1-page document, as well as a slideshow. Use of these documents to attract investment is outlined in the *Polypropylene beneficiation investment promotion strategy and implementation plan* documents.

INVESTING IN POLYPROPYLENE BENEFICIATION IN SOUTH AFRICA

The National Economic Development and Labour Advisory Council (NEDLAC) brings together government, organised business, organised labour and organised community groupings to discuss issues of social and economic policy. It aims to make economic decision-making more inclusive, and to promote the goals of economic growth and social equity.

Why is South Africa an attractive location for investing in polypropylene beneficiation?

- South Africa enjoys a **supply of polypropylene in excess of local demand**, available at **competitive prices** for products that are ultimately exported, and offers wide availability of other key raw materials.
- South African exporters **benefit from access to key markets** through **preferential trade agreements** and **proximity to growing regional markets**. In addition, **established downstream customers** offer indirect opportunities to export higher value-added products.
- South African **industrial policy prioritises the plastics sector**, allowing manufacturers to benefit from **effective government and industry support** aimed at increasing investment, exports, and competitiveness.
- South Africa has a **vibrant polypropylene beneficiation industry**, offering opportunities for collaboration and partnership.
- South Africa's growing economy, political stability, programmes to upgrade infrastructure and skills, and sophisticated financial and telecommunications services offer a **competitive operating environment for manufacturers**.

Government investment in infrastructure:	R420bn committed for 2007 to 2009
South African Gross Domestic Product (GDP) growth:	5% in 2006
Retail sales growth:	15% per year from 2001 to 2006
Total SADC consumers:	215 million
Foreign direct investment in South Africa:	US$69bn (R500bn) in 2005

Where are the key opportunities for investment?

- South Africa offers a supportive investment environment for **sustainable and responsible investment**, including Broad-based Black Economic Empowerment (BBBEE) policies, sustainable environmental management policies, and availability of Clean Development Mechanism funding (for example for projects that improve energy efficiency or reduce waste)
- South Africa's vibrant polypropylene beneficiation industry, with over 1,000 converters, offers **opportunities for local joint ventures, partnerships and technology agreements**
- Opportunities include **automotive components**, **packaging**, **building and construction materials**

For further information, please contact **the Department of Trade and Industry (the dti)**:

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- Include website details once confirmed

Further information:

- Polypropylene properties and application – see pg 23

Access to competitively-priced polypropylene and other key raw materials

Abundant supply of polypropylene, available at competitive prices for exporters

South Africa enjoys a **reliable supply of polypropylene**, due to its **extensive coal resources** and production of propylene as part of its coal-to-liquids fuel production. The two producers, **Sasol Polymers** and **Safripol** produce a total of 350,000 tons of polypropylene per year. Sasol Polymers has started its additional capacity and this will become fully available during the course of 2008. Total supply will well exceed the South African domestic requirement of 250,000 tons per year.

Converters have access to a **complete range of grades**, including injection-moulding, extrusion, and general-purpose grades. Sasol Polymers and Safripol provide **excellent technical support** to ensure that conversion processes are **optimised to take full advantage of the supplied grade's properties**. Compounders Plastamid and Panacea Polymers are also present in South Africa to **formulate compounds for more specialised applications**. Plastamid's ten compounding lines provide capacity of 20,000 tons per year.

Further information: Grades offered by Sasol and Safripol and typical applications – please see pg 25

South African polypropylene producers make available competitively-priced polypropylene to South African converters for the production of goods destined for deep-sea export markets. This pricing is intended to stimulate and support exports of beneficiated and value-added goods made from polypropylene in preference to exporting polypropylene itself. This is done by means of a rebate on proof of export of the goods.

Wide availability of other raw materials

Investors in South Africa also have access to a wide range of other locally-manufactured inputs, including:

- Other **thermoplastics**, available from major polymer suppliers in South Africa, including:
  - High Density Polyethylene (HDPE) available from Safripol
  - Low Density Polyethylene (LDPE) and linear-LDPE available from Sasol Polymers
  - Polyvinyl Chloride (PVC), available from Sasol Polymers
  - Polyethylene terephthalate (PET), available from SANS Fibres and Hosaf Fibres
- A range of **engineering plastics and speciality polymers**, from general purpose compounds, filled and reinforced grades to highly specialised Polytetrafluoroethylene (PTFE) and silicon grades, are available from South African compounders Plastamid and Panacea Polymers. Plastamid has technology agreements with international companies such as DuPont, The Dow Chemical Company, Milliken Chemical Co. and Kraton Polymers, ensuring that products remain on the cutting edge of technology.
- A range of **natural fibres**, which can be used in polypropylene composites, including:
  - Kenaf: a R100m investment in a kenaf processing facility in KwaZulu-Natal supplies processed kenaf fibres for use in biocomposites in automotive components
  - Forestry products: South Africa has 1.4 million ha of plantation forests
- A range of **metals and fabricated metals** including steel and aluminium

Access to key markets

Preferential trade agreements with key markets

South African exporters enjoy **preferential access** to a number of **large, attractive developed markets**. These include **the European Union** (EU), where per capita plastics consumption is estimated at 80kg, and the **United States** (US), where consumption is about 110kg per capita. **Canada** and **Japan** also provide South Africa preferential access through the Generalised System of Preferences (GSP) mechanism.

Polypropylene consumption in **developed markets** is expected to **grow at between 5 and 6%** per year, driven mainly by growth in private consumption expenditure, and substitution by plastics of traditional materials. Polypropylene consumption in **developing countries** is expected to **grow rapidly at 10 to 12%**, particularly in **China**, **India**, and the **Middle East**, as consumption of plastics rises from a low base.

In addition to preferential access to **Southern African markets** as part of the Southern African Customs Union (SACU) and the Southern African Development Community (SADC), South Africa is **strengthening links** with a number of other **developing** countries:

- Negotiations towards a preferential trade agreement are underway with **Mercosur**, to provide access to markets in **Brazil**, **Argentina**, **Uruguay**, **Paraguay**
- The **India-Brazil-South Africa (IBSA)** trilateral provides a mechanism for cooperation and exchange
- Trade and cooperation agreements with **India**, **China**, **Singapore**, **South Korea**, **Nigeria** and **Kenya** have also been proposed

Africa Growth and Opportunities Act (AGOA)	▸ Provides duty-free and quota-free access to **the US** for products eligible under the GSP system (approximately 4,600 products), as well as an additional 2,000 products ▸ Eligible products include a range of **packaging products** (including stoppers, lids and closures of plastic), **appliances and tableware**, **building and construction materials** (including insulated wire and coaxial cable), and **plastic furniture** ▸ Preferential access under AGOA has been extended to 2015
SA-EU Trade and Development Cooperation Agreement (TDCA)	▸ Provides for the reduction and elimination of duties over a transition period of 10 years to 2014, on approximately 95% of the products exported by South Africa to the **EU** ▸ Eligible products include a range of **packaging** products (included crates and sacks of plastic), **appliances and plastic tableware** (including domestic electrothermic appliances), **building and construction materials** (including carpets of man-made textiles), and **plastic furniture** ▸ The EU recently agreed to phase out all tariffs on South African exports of **automotive components** by 2010 ▸ SA-EU TDCA to be integrated to into the current negotiations towards a SADC-EU Economic Partnership Agreement (EPA), to be concluded in 2008
SACU-European Free Trade Association (EFTA)	▸ Provides for duty-free access to **Iceland**, **Liechtenstein**, **Norway** and **Switzerland** for: – Non-agricultural products (HS chapters 25-98), which includes **packaging** (including sacks, crates, caps and closures of plastics), **appliances and plastic tableware**, **automotive components**, **building and construction materials, plastic furniture** and **medical devices** (including catheters, sutures, orthopaedics, dressings) – A limited range of agricultural products are accorded duty-free access, although these may be subject to duties where raw material prices differ

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Southern African Customs Union (SACU)	▸ Goods are traded free of duties and quotas with **Botswana**, **Lesotho**, **Namibia** and **Swaziland**
Southern African Development Community (SADC)	▸ Preferential access to SADC states ▸ 85% of inter-regional trade at zero tariffs targeted for 2008 ▸ Tariff phase-downs will be in line with economic activity, therefore tariffs facing South African exports will be phased down more slowly than South African import tariffs

Market access is also facilitated through the various roles of the **dti**, including addressing non-tariff barriers to trade, sharing market information (including through the National Trade Information System), promoting business linkages, and providing incentives to support entry into new markets.

Updates required: Status and coverage of trade agreements need to be updated on an ongoing basis to ensure that up-to-date and accurate information is available.

Proximity to growing regional markets for industrial and consumer products

Sub-Saharan African consumer and industrial product markets are growing rapidly as many countries **enjoy increased stability** and **strong economic growth**. Angola, for example, achieved Gross Domestic Product (GDP) **growth of 15%** in 2006, **Mozambique achieved 8%**, **Malawi 7%**, and Ghana, Nigeria, Zambia and Tanzania have achieved **growth rates higher than 5%**. Plastics consumption is expected to rise as **income per capita increases** in these markets, and consumption catches up with developed countries.

South Africa offers an ideal location from which to serve these growing markets, offering sophisticated financial and telecommunications services, and trade and logistics infrastructure that is being upgraded to further support trade with countries in the region. South Africa's position is further strengthened by strong economic links through **regional trade agreements** and **outward investment by South African companies**, particularly in mining, retail and telecommunications.

South Africa's **consumer and industrial markets** have also experienced rapid growth. Consumer spending has been driven by the expanding black middle class and rising incomes, with retail sales increasing 15% per year from 2001 to 2006, and new vehicle sales increasing 17% in 2006.

Strong growth in **investment in infrastructure** has led to demand for building and construction materials and furniture, as the South African government upgrades and increases capacity of infrastructure and prepares for the 2010 Football World Cup.

Well-established downstream customers

There is a **strong presence of related downstream industries** in South Africa, providing access for polypropylene components to both domestic and export markets. These include large **major automotive Original Equipment Manufacturers (OEMs)**, large **construction companies**, and **food and beverage companies**.

Major global automotive OEMs BMW, Daimler, Fiat, Ford (incorporating Mazda), General Motors, Nissan, Toyota, and Volkswagen manufacture vehicles in South Africa, and a number of independent importers import vehicles into South Africa. Automotive OEMs are clustered with Tier 1, 2, 3 and 4 component suppliers in KwaZulu-Natal, Gauteng, and the Western and Eastern Cape provinces. Automotive OEMs invested R6.2bn in 2006, **increasing capacity to serve both the local and export markets**. The Motor Industry Development Programme (MIDP) aims to increase the local content of vehicles assembled in South Africa, through increased support to component manufacturers.

Update required: This would need to be updated on release of any changes to the MIDP.

The **automotive** sector has achieved **outstanding export performance**, with **growth in exports of 26% CAGR** from 1995 to 2006. Over 180,000 new vehicles are exported a year, with major models including:

- BMW: 3-Series to Japan, Australia and US
- Daimler SA: C-Class to UK, Japan, Australia
- Toyota: RunX and Corolla to Australia, 2007 platform for Fortuner and Hilux to Europe
- Volkswagen: Golf 5 and Jetta to Asia-Pacific and other right hand drive markets

Exports of components have also grown strongly to reach a value of **R30.5bn** in 2006, with Germany, Spain and the UK as major destinations.

South Africa is experiencing a building and construction boom, which has increased the demand for **building materials**, including polypropylene composites. The growth in public sector infrastructure spend has resulted in major transport, energy, and other infrastructure expenditure. Large construction companies including Murray & Roberts, Aveng and Group5 operate both in South Africa and in Southern African countries and are benefiting from increasing demand for infrastructure.

Major international companies in the food and beverage and fast-moving consumer goods (FMCG) sectors including Nestle, Danone, Heinz, Parmalat, Unilever, Colgate Palmolive and Procter & Gamble are located in South Africa.

Effective government and industry support aimed at increasing investment, exports, and competitiveness

Supportive industrial policy

The recently launched **National Industrial Policy Framework** (NIPF), and Industrial Policy Action Plan (IPAP), prioritises the **chemicals, plastic fabrication and pharmaceuticals sector**, and the **automotive and components sector**, as two of the four main sectors to be targeted for specific support.

Polypropylene beneficiation in particular has been identified as an opportunity for economic growth, in the packaging and automotive sectors. This is further supported by the **Chemicals Sector Development Strategy**: "the polypropylene plastics conversion intervention is the highest priority, due to both the importance of the plastics sub-sector, as well as the abundance of feedstock in South Africa".

In addition to this targeted sector support, the NIPF also sets out a range of programmes to increase competitiveness, including industrial financing, strengthening competition policy, supporting research and development, and improving education.

South Africa's NIPF further supports the Accelerated and Shared Growth Initiative for South Africa (ASGISA), which aims to increase economic growth through development of priority sectors, skills development, development of small businesses, and increasing government capacity.

Wide availability of incentives

A wide range of incentives are available to support investment, exports, and enterprise and sector competitiveness.

Investment and export incentives	
Industrial Development Zone (IDZ) programme	▸ Provides **competitive infrastructure**, **lower utility rates** and **streamlined customs administration**, with **exemptions on raw material import duties and VAT** for products destined for export, and one-stop shop for all regulatory and documentation preparations. Current IDZ designations are: – Coega IDZ – East London IDZ – Richard's Bay IDZ – OR Tambo International Airport IDZ
Small and Medium Enterprise Development Programme (SMEDP) *(currently under review)*	▸ Provides incentives for expansion of existing businesses and new projects: – Eligible projects can claim a tax-free **cash grant of up to 10%** of the investment cost, paid over three years – The programme includes the Skills Support Programme, which includes a **three-year grant of up to 50% of the cost of training new staff** as the result of an expansion or new project, and a grant for training equipments and course materials
Foreign Investment Grant (FIG) *(currently under review)*	▸ Cash grant incentive scheme to foreign investors who invest in new manufacturing businesses (free of financial liability) in South Africa: – Compensation for the qualifying **costs of moving new machinery and equipment from abroad** – Covers up to **15% of the costs of new machinery and equipment** up to a maximum of R3m per entity

Investment and export incentives	
Critical Infrastructure Programme	▸ Cash grant incentive for projects designed to improve critical infrastructure ▸ The incentive covers **up to 30% of the cost of development costs in qualifying infrastructure**
Motor Industry Development Programme *(currently under review)*	▸ Provides **credits to automotive OEMs for import tariffs** on imported built-up vehicles and components, on the basis of the value of local content of exported components and built-up vehicles ▸ Productive asset allowance available to motor vehicle assemblers as an **import duty credit calculated to 20% of value of expenditure on productive assets**, spread equally over 5 years.
National Industrial Participation Programme	▸ All government and parastatal purchases or lease contracts for goods, equipment or services with an imported content equal to or exceeding US$10m (R72m[1]) oblige the supplier to engage in **local commercial or industrial activity valued at 30% or more** of the value of the imported content of total goods purchased or leased under government tender
Accelerated Depreciation Allowance and tax relief	▸ Promotes the acquisition of new manufacturing assets by allowing **new manufacturing assets to be depreciated over 4 years**, 40% of the cost of the asset will be deducted in the first year and 20% of the cost of the asset will be deducted in the subsequent 3 years ▸ Depreciation period of **commercial buildings of 20 years** ▸ **Lower tax rates** for qualifying small businesses with revenue less than R14m ▸ **Double deduction of the first R20,000** start-up costs of a new business
Customs duty industrial rebates	▸ The International Trade Administration Commission (ITAC) considers providing rebates on customs duties of imported industrial inputs not available locally for manufacturing ▸ Criteria used to assess applications include: – The input, or a suitable substitute, is not manufactured within SACU – The duty means that the end product is not price-competitive with comparable imported goods
Export Marketing & Investment Assistance Scheme (EMIA)	▸ Partially compensates exporters and investors for **costs of activities aimed at developing export markets**, and assists with the facilitation of investments into South Africa

For up-to-date information please see www.thedti.gov.za.

[1] Using an average exchange rate of US$1:R7.20 from September 2006 to September 2007

R&D and skills incentives	
Technology and Human Resources for Industry Programme (THRIP)	▶ Administered by the National Research Foundation, provides **matching funding of up to one third** of projects that promote and facilitate scientific research, technology development and technology diffusion, and involve human resource development
Support Programme for Industrial Innovation Fund (SPII)	▶ The Product Process Development Scheme: – A **grant of between 65% and 85% of the qualifying cost incurred during the technical development stage**, with a maximum grant of R500,000 per project, for small and micro enterprises (employees <50, turnover <R13m; assets <R5m) ▶ The Matching Scheme: – A **grant of up to 50% of the qualifying cost incurred during the technical development stage**, up to a maximum grant of R1.5m per project, to SMEs (employees <200, turnover <R51m, assets <R19m) ▶ The Partnership Scheme: – A **conditionally repayable grant of 50% of the qualifying cost incurred during development activity** with a minimum grant amount of R1.5m per project, repayable on successful commercialisation of the project
Tax allowance and depreciation on R&D expenditure	▶ **150% allowance for R&D-related expenditure** ▶ **Accelerated write-off period of 3 years** for capital expenditure related to R&D in the field of applied natural sciences, of 50% in the first year, 30% in the second year, 20% in the third year
Skills development incentive	▶ Available to employers offering approved National Qualification Framework learnerships ▶ A **tax deduction allowed** on conclusion of learnership agreement and **further R25,000 on successful course completion**

For up-to-date information please see www.thedti.gov.za.

Updates required: This would need to be updated on an ongoing basis to ensure that current and accurate information is available on the MIDP, SMEDP, and FIG, as well as other programmes that may undergo review.

Sector development initiatives

Incubation and enterprise development in the chemicals sector is offered through **ChemCity**, a company owned by Sasol which aims to support enterprise development. The Plastics Conversion Group of ChemCity focuses on supporting entrepreneurs in the plastics industry, in the following areas:

- Development of business ideas
- Matching entrepreneurs to idea creators
- Reengineering of existing businesses
- Assistance in accessing finance for new projects and growth of existing companies
- Assistance in site selection, and provision of sites and facilities at competitive prices
- Ongoing mentorship

The **Automotive Industry Development Centre** (AIDC) provides services to automotive OEMs and component suppliers, focusing on skills development and training, supply chain development and supplier development.

Tooling-related initiatives provide investors with an environment where advanced tooling skills and facilities exist that can improve the global competitiveness of their production processes and enhance the efficiency of their maintenance.

The **National Tooling Initiative** has been established to support and strengthen South Africa's tool, mould and die industry through a range of programmes and projects, including skills development, technology recapitalisation, BBBEE and small, medium and micro enterprise (SMME) support, and export development.

The **Institute for Advanced Tooling** provides training across all aspects of tooling, including product design and development, prototyping and tooling, with the aim of establishing a network of engineers to satisfy tooling needs of manufacturing enterprises. In collaboration with a range of companies and organisations, including the Indo-German Tool Room, in India, the Institute ensures that training and equipment are in line with international innovation, developments in the tooling industry, and standards.

Technology and R&D support

A range of technical support services is available to polypropylene converters, available from polypropylene producers, compounders, and research centres.

Technical support for manufacturers is readily available from **Safripol**, including:
- **Product development support**, both for developing new products and for using polypropylene to manufacture existing products
- **Process optimisation**, including adaptation to new machinery

Sasol Polymers operate their well-equipped Polymer Technology Centre at Modderfontein near Johannesburg, where polymer scientists and technicians provide free support, including advice on product and polymer properties; information on product and market trends; help with the commissioning, operation and optimisation of conversion equipment; development of new product grades and refinement of others for South African conditions; and testing and analysis of customer samples and the supply of samples for development work.

Compounders also offer a range of technical support for product development and design, drawing on **extensive thermoplastic testing capabilities and equipment**, including:
- Mechanical testing
- Material processing
- Colour measurement
- Thermal properties and flammability testing
- Failure analysis
- Material composition analysis

Research and development is often conducted in collaboration with centres of research, including:
- **Council for Scientific and Industrial Research (CSIR) Polymers and biomaterials**, which focuses on:
  - Industrial polymers and composites: **barrier technology**, **breathable membranes** and **structural composites**, and **recycling** of polymers
  - Biomaterials: polymer applications in the fields of **drug delivery**, **tissue engineering**, **biotechnology**, **nanotechnology** and **composites**
- The **CSIR Fibres and Textiles** division focuses on **fibres**, **textiles** (including polymer and natural fibre composites) and **clothing**, utilising emerging technologies such as nanotechnology and biotechnology
- The **National Product Development Centre** (NPDC), part of the CSIR, focuses on the application of **rapid product development** and promotes rapid product development methodologies

- The **Institute for Polymer Science**, Stellenbosch University, which hosts the UNESCO Associated Centre for Macromolecules & Materials, focuses on the development and evaluation of **technical and performance textiles** for niche markets. Research areas include membrane technology, analytical polymer chemistry, polymerisation methodology, smart textiles, nano-fibres, and polymer fibres.
- The **Centre for Polymer Science**, at Tshwane University of Technology, conducts physical, stability and analytical testing of polymers

Furthermore, South Africa's **national system of innovation** provides a broad network of support for technology and R&D activities.

Support for standards, quality, accreditation and metrology

South Africa offers an effective, modernised and internationally recognised technical infrastructure for standards setting, accreditation and metrology that enables competitiveness, facilitates access to markets, and supports international collaboration.

Product standards are provided through a range of certification bodies, laboratories, and inspection bodies which are recognised through the **South African National Accreditation System** (SANAS), a signatory of the International Laboratory Accreditation Cooperation (ILAC). Acceptance of accredited test and calibration data is internationally promoted, reducing or eliminating the need for retesting in an importing country.

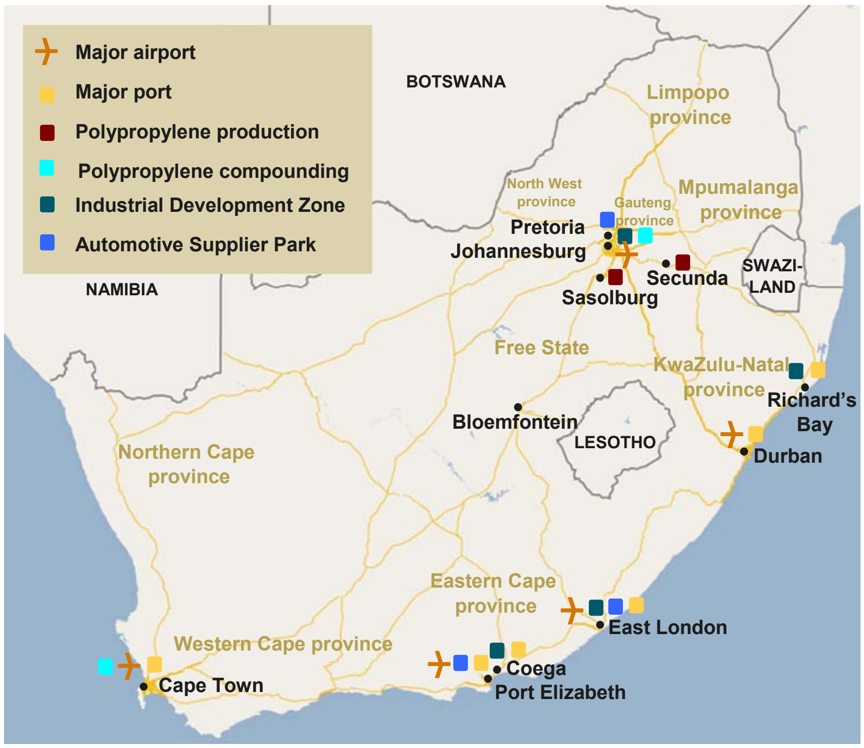
Standards South Africa develops, issues, and provides information on standards in all sectors of industry, including **chemical and mining standards**, **electrotechnical & information and communication technology (ICT) standards**, **food and health standards**, and **materials standards**.

The **Automotive Industry Development Centre** recently received an **international award for leadership in promoting quality standards** in the South African automotive industry, awarded by the 19th International Quality Crown Convention for Excellence and Business Prestige, part of the programme of the Business Initiative Directions Awards.

Vibrant polypropylene beneficiation industry

Approximately 1,000 companies operate in South Africa's plastics converting sector, engaging in a wide range of conversion activities. In total, companies convert about 250,000 tons of polypropylene per year.

Almost one third of plastics manufacturing companies are located in the Ekurhuleni Metro (in Gauteng Province), about 20% in the Western Cape, and 20% in KwaZulu-Natal.



South Africa has experienced **success in exporting** a number of products containing polypropylene, including:

- Polypropylene components differentiated by design and quality, including innovative products for the building and construction industry, and consumer and industrial packaging
- Niche food products for consumer markets, using consumer packaging
- Pool-cleaning equipment that uses plastic parts
- Automotive components through South Africa's well-established automotive industry, both for export as part of assembled vehicles and as components

Polypropylene converters **collaborate** with upstream suppliers and downstream customers in the food and beverage, automotive, and retail sectors to **optimise product performance**. Many plastics converters have **internal research capacity**, with some converters having significant **capacity and equipment** for product design, development and testing. Many companies have also **partnered with international companies** to improve technical performance and market access.

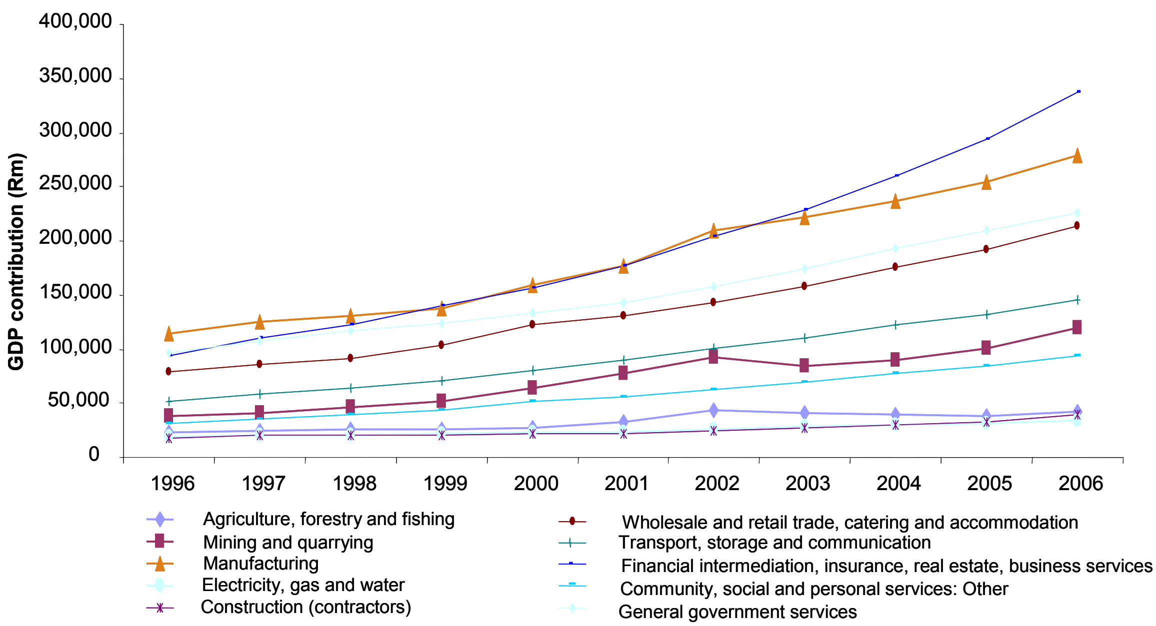
A **range of industry associations** provide strong representation and support for companies in the plastics sector, including the Plastics Federation South Africa, and the Plastics Converters Association.

Growing economy and stable political environment

South Africa is amongst the most stable African countries in terms of its macroeconomy and political system. The **South African economy has displayed consistent growth,** with an average GDP growth rate of 3.7% between 1996 and 2005, with growth accelerating more recently to about 5%, resulting in a GDP of R1,727bn in 2006.

Most sectors have contributed to strong GDP growth, with **manufacturing being one of the most important economic sectors**:

South African economic output by sector



Source: Statistics SA

Economic policy has focused on targeted sector development and support, export growth, increasing foreign investment, and enhancing infrastructure capacity within an **environment of low inflation**. Fiscal discipline has resulted in an estimated **R5.2bn budget surplus** for the 2006/07 financial year, with another surplus of R10.7bn anticipated for the 2007/08 financial year.

Fixed investment increased by 12% in 2006, driven mainly by investment in non-residential construction, transport and utilities infrastructure. **Foreign direct investment** inflows to South Africa have been growing strongly, reaching US$6.4bn in 2005 (about R46bn).

Efforts to improve governance include the introduction of the Promotion of Access to Information Act (2000), Public Finance Management Act (2000), and South African Prevention and Combating of Corrupt Activities Act (PCCAA) (2004). The King Codes on corporate governance are considered to provide guidelines to companies in line with international best practice.

Competitive production costs and operating environment

Since 2004, South Africa has been rated as the **most competitive country in Sub-Saharan Africa** in the World Economic Forum's annual Global Competitiveness Index. In the 2007/2008 index South Africa ranked ahead of Costa Rica, China, Mexico, and India. South Africa also performed better than other Sub-Saharan countries on the sub-indices of institutions, infrastructure, higher education, and goods market efficiency. In terms of the WEF's Business Competitiveness Index, of the 127 countries measured South Africa ranked 26 for sophistication of company operations and strategy and 35 for the quality of the national business environment.

According to the World Bank's 2008 Ease of Doing Business Index, **South Africa is the easiest country in which to do business in Sub-Saharan Africa**, and has a more **investor-friendly** environment than France, Spain, Italy, Mexico, China, and Costa Rica. South Africa ranks amongst the top 10 countries in the world for protecting investors.

Similarly, South Africa performed well on Transparency International's 2007 Corruption Perception Index, ranking second in the African region after Botswana, and with an overall country rank of 43 of 179 countries.

Furthermore, South Africa's electricity costs are amongst the lowest in the world, and other production costs are competitive with those in developed countries.

While some challenges remain, systems have been put in place to address these, including the following:

- A system of social grants is in place that reaches over 10 million South Africans
- Health services have been transformed to give more access to the poor, including provision of free health services at public primary health care institutions and community health care clinics.
- There has been a 20% increase in real wages and productivity since 1994, which has brought about an increase in the competitiveness of business and better living standards to millions. South Africa has some of the most progressive labour legislation in the world, with institutional mechanisms to settle disputes, ensure fairness in the workplace, and nurture cooperative industrial relations
- Additional resources have been committed to fighting crime, including an additional R11bn budget allocation between 2006/7 and 2009/10, target of a 200,000-strong police force by 2011, more effective use of technology, improved collaboration with the private security industry, as well as partnerships with communities, local business and the international community

The South African operating environment is also supportive of sustainability and responsible production. For example, South Africa has been ranked **28th among 108 countries** on the R**esponsible Competitiveness Index** prepared by the global think tank AccountAbility.

Further information: Link/reference to the dti's *Investor handbook* and *Cost of doing business in South Africa*

Programmes for upgrading skills and increasing skills availability

South African companies have access to about 240,000 science, engineering and technology graduates; this is expected to increase to 450,000 by 2018.

Companies also have access to workers across a range of skill levels, including:

- Highly-skilled workers, including: Managers (e.g. general, human resources, financial managers), professionals (e.g. accountants, engineers)

- Skilled workers, including: Draftspersons, manufacturing and process technicians, toolmakers and patternmakers
- Semi- and unskilled workers, including: Clerical, administrative and sales workers, machinery operators and drivers, general labourers

Manufacturing subsector	Skills level	No. of workers
Transport equipment	Highly skilled	21,378
	Skilled	66,411
	Semi- and unskilled	60,887
Textiles	Highly skilled	4,035
	Skilled	17,999
	Semi- and unskilled	25,600
Plastic products	Highly skilled	2,803
	Skilled	10,917
	Semi- and unskilled	25,632
Furniture	Highly skilled	2,816
	Skilled	18,677
	Semi- and unskilled	17,903
Radio, TV, instruments, watches and clocks	Highly skilled	2,915
	Skilled	9,889
	Semi- and unskilled	5,562

Source: Quantec

The skills initiative of ASGISA, the **Joint Initiative for Priority Skills Acquisition** (JIPSA) has been launched jointly by government and industry to improve access to skills. It aims to ensure closer alignment of skills possessed by the labour force with skills needs of the economy, and to improve the quality of education delivered by educational institutions. Key initiatives include identification of scarce skills, mentoring programmes, overseas placement of trainees, and drawing in retirees, expatriate South Africans, and immigrants.

Sector Education and Training Authorities (SETAs) engage in skills development through identification of scarce skills, development of learnerships, bursaries, and learning material. SETAs supporting skills development in the plastics sector are:

- Chemicals Industry Education and Training Authority (CHIETA)
- Manufacturing, Engineering and Related Services Sector Education and Training Authority (MERSETA)
- Media Advertising Print Publishing and Packaging Sector Education and Training Authority (MAPPP-SETA)
- Information Systems, Electronics and Telecommunications Technologies (ISETT)
- Construction Education and Training Authority (CETA)
- Clothing, Textiles, Footwear and Leather Sector Education and Training Authority (CTFL SETA)

Further information: Education and training institutions – see pg 27

Investment in infrastructure

Significant investment is planned in increasing efficiency and capacity of South Africa's infrastructure:

- **R150bn investment in electricity generation capacity** over the next five years (2007-2012) to accommodate South Africa's growing economy's energy requirements, including coal-fired plants and gas turbine plants

- **US$1.3bn (R9bn) investment in undersea telecommunications cables**, planned for completion in 2009, connecting South Africa to Brazil, East Africa, and Europe, improving access to high-speed broadband
- **R78bn investment in transport infrastructure** to improve efficiency and productivity, safety, cost containment and customer service, including **upgrading and expansion of port terminals**

Further information

- South Africa's Broad-based Black Economic Empowerment policy – pg 29
- Requirements to establish and operate a business in South Africa – pg 31
- Availability of finance – pg 34

Kaymac Structural Foam

Kaymac Structural Foam (Pty) Ltd, part of the Kaymac Group, is an independent company specialising in **complete plastic systems and packaging solutions for the automotive, industrial**, and **returnable packaging sectors**.

Accessing key automotive and industrial markets in South Africa and internationally

Kaymac manufactures various **rigid components** that comply with internationally-recognised **ISO 9001:2002, ISO 14001 and TS 16949** standards, utilising the latest **low-pressure injection moulding** technology.

Kaymac **supplies reusable packaging** to a **wide range of markets**, including:

- Automotive (both original equipment and first-tier manufacturing)
- Food and pharmaceutical
- Printing and packaging
- Petrochemical and specialised chemicals

Returnable packaging has become a **key market segment**, as an alternative to disposable or non-returnable packaging which drains natural resources and is often harmful to the environment.

Kaymac also supplies **components for both interior and exterior automotive applications** to **South African operations** of OEMs General Motors, Volkswagen, Nissan, Toyota, Bell Equipment, Case Tractors, MAN, and John Deere. Components are also supplied **directly to international branches of OEMs**.

With its head office and factory located in Pietermaritzburg, KwaZulu-Natal Province, Kaymac enjoys **easy access to transport links**, including the Port of Durban, and the Durban-Gauteng road and rail corridor. Kaymac also achieves **national reach** through its sales branches in Cape Town in the Western Cape Province, Port Elizabeth in the Eastern Cape Province, and Johannesburg in Gauteng Province.

Growing strongly in South Africa’s advantageous investment environment

Since its formation in 1977, Kaymac has experienced **significant growth,** which it attributes to the **advantageous South African investment environment** offering:

- Attractive **incentive allowance schemes**
- **Excellent technical support** from polymer suppliers
- **Locations close to OEMs** in South Africa, allowing for improved customer service
- **Competitive energy and site costs**, allowing costs to be effectively contained

Kaymac has also made **substantial investments in technology upgrades and worker training** to support this growth.

“Kaymac is encouraged by the growth from its customer base and envisages a bright future for innovative polypropylene conversion in South Africa”

Belgotex Floorcoverings

Belgotex Floorcoverings (Pty) Ltd **manufactures carpets for both the residential market** (under the Belgotex Décor and Belgotex Home brands), and **the commercial market** (under the Nexus brand), accessing major markets in **Southern and East Africa**, the **Far East**, **Europe**, **Africa**, **Australia** and **South America**.

Producing high quality carpets using South African polypropylene and state-of-the-art technology

Belgotex uses approximately **1,000 tons of polypropylene per month** in its production processes, **sourced from a polymer manufacturer in South Africa (Sasol Polymers)**. The main products manufactured are **needlepunch carpets**, made using polypropylene, and **tufted carpets** using nylon and polypropylene. For its needlepunch range, homopolymer polypropylene chips are melted to create fibres, which are then stretched, crimped and carded. The company has received **excellent technical advice** from its polymer supplier in **optimising polypropylene quality and characteristics** required for carpet manufacturing processes.

Belgotex's factory in Pietermaritzburg, KwaZulu-Natal Province, uses **state-of-the-art machinery** valued at R1bn (US$145m). The factory covers 90,000m^2, with warehousing covering a further 20,000 m^2. Belgotex employs 700 people in manufacturing processes at the plant and in other areas of company operations.

Competing in the growing domestic market and export markets from a favourable South African base

Since its establishment in 1985, Belgotex has grown to become the **leader in the carpet segment of the South African floor coverings market**, with 70% share of the 20 million m^2 market. The overall South African floor covering market (including tiling and other coverings) has grown to approximately 80 million m^2 as a result of **high growth in the housing and construction markets** driven by unprecedented economic growth, which has accelerated in the last 5 years.

Drawing on its **unique design capacity**, Belgotex **exports about 15 to 20%** of its output to **niche markets** in Europe, Australia, New Zealand, Brazil, Argentina, and major markets in Southern Africa. The road network between Pietermaritzburg and Durban and consistent service by road freight service providers **ensure efficient distribution** to the Port of Durban, one of the largest container ports by volume in South Africa.

Belgotex invests significant resources in ensuring that its **employees are globally-competitive**, with **productivity rates on par with other global manufacturers**. This is achieved through an intensive in-house training programme equipping employees with skills required to operate and maintain machinery.

"Belgotex is encouraged by the superior technical and aesthetic properties of polypropylene carpets and envisages renewed growth in the carpet floor-covering market"

Useful contacts

Investment facilitation		
Trade and Investment South Africa (TISA, a division of the dti) www.thedti.gov.za	▸ Support for trade and investment through missions ▸ Investment facilitation services	Tel: +27 12 394 9500 investmentsa@thedti.gov.za
Gauteng Economic Development Agency (GEDA) www.geda.co.za	▸ Support for trade and investment through missions ▸ Coordinates investment facilitation with metropolitan areas within Gauteng, including Ekurhuleni Metro	Tel: +27 11 833 8750 angela@geda.co.za
Trade & Investment KwaZulu-Natal (TIKZN) www.tikzn.co.za	▸ Priority sectors for investment facilitation include: – Plastics conversion – Automotive sector	Tel: +27 31 366 0600 info@tikzn.co.za
Trade & Invest Limpopo (TIL) www.til.co.za	▸ Trade and investment promotion and facilitation services	Tel: +27 15 295 5171 agrinette@til.co.za
Mpumalanga Economic Growth Agency (MEGA) www.mega.gov.za	▸ Priority manufacturing sectors include the chemicals and plastics conversion sector, due to Sasol Polymers' polypropylene production located in Secunda	Tel: +27 13 752 2440 trade-investment@mega.gov.za
Wesgro (Western Cape trade and investment promotion agency) www.wesgro.org.za	▸ Priority manufacturing sectors for investment facilitation include: – Food and beverage processing – Automotive sector ▸ Trade facilitation focusing on West African markets	Tel: +27 21 487 8600 info@wesgro.org.za
Free State Development Corporation (FSDC) www.fdc.co.za	▸ Trade and investment facilitation services ▸ Support for polypropylene conversion in particular due to location of Sasolburg within the Free State	Tel: +27 51 400 0800 fdccorp@fdc.co.za
Eastern Cape Development Corporation (ECDC) www.ecdc.co.za	▸ The plastics sector is a focus area, particularly as it relates to the automotive sector in the Eastern Cape located in a triangle between Port Elizabeth, Uitenhage and East London ▸ Works closely with the Coega Development Corporation (CDC) and East London Industrial Development Zone (ELIDZ)	Tel: +27 43 704 5600 info@ecdc.co.za
Invest North West (INW) www.inw.org.za	▸ Trade and investment promotion and facilitation services	Tel: +27 14 594 2570 inw@inw.org.za Gaba Tabane gaba@inw.org.za

Investment facilitation		
Northern Cape Department of Economic Affairs and Tourism www.northern-cape.gov.za	▸ Trade and investment promotion and facilitation services	Tel: +27 53 839 4002
Development Finance Institutions		
Industrial Development Corporation (IDC) www.idc.co.za	▸ Various development finance products and services ▸ Administration of Support Programme for Industrial Innovation Fund (SPII)	Metal, Transport and Machinery Tel: +27 11 269 3234 Chemicals , Textiles and Allied Industries Tel: +27 11 269 3131
Development Bank of Southern Africa (DBSA) www.dbsa.org	▸ Various development finance products and services	Tel: +27 11 313 3911
National Empowerment Fund (NEF) www.nefcorp.co.za	▸ Provides funding to enable Broad-based Black Economic Empowerment	Tel: +27 11 305 8000 info@nefcorp.co.za
Ithala Development Finance Corporation www.ithala.co.za	▸ Development financing in KwaZulu-Natal province	Tel: +27 31 907 8911 marketing@ithala.co.za clientservice@ithala.co.za
Industry and government support entities		
Chemicals division of the dti www.thedti.gov.za	▸ Policy direction and sector support strategies for the chemicals sector	Thokozani Masilela Tel: +27 12 394 1406 tmasilela@thedti.gov.za
Chemcity www.chemcity.co.za	▸ Incubation and enterprise development support in downstream chemicals sectors	Andrew Scott Tel: +27 11 344 2225 Hennie Roets Tel: +27 11 344 2270
Institute for Polymer Science Department of Chemistry and Polymer Science Stellenbosch University http://academic.sun.ac.za/polymer/	▸ Polymer science research ▸ Hosts the UNESCO Associated Centre for Macromolecules & Materials	Ron Sanderson Tel: +27 21 808 3172 rds@sun.ac.za
CSIR Centre for polymer science and bioceramics www.csir.co.za	▸ Research into utilising polymers as enablers in the fields of drug delivery, tissue engineering, biotechnology, nanotechnology and composites	Sean Moolman Tel: +27 12 841 4212 smoolman@csir.co.za
Automotive Industry Development Centre (AIDC) www.aidc.co.za	▸ Provides services to automotive OEMs and component suppliers, focusing on skills development and training, supply chain development and supplier development	Paulo Fernandez Tel: +27 012 564 5289 aidc@aidc.co.za
Institute for Advanced Tooling	▸ Training facility for the tooling industry	Bob Bond Tel: +27 12 382 9260/4190 bondj@tut.ac.za

Industry associations		
Chemical and Allied Industries Association www.caia.co.za	▸ Administers Responsible Care programme to address safe manufacturing, storage, transport, use, and disposal of chemicals ▸ Represents industry concerns ▸ Supports education initiatives in science, engineering and technology	Frank Baker Tel: +27 11 482 1671 caia@iafrica.com
Plastics Federation of South Africa (PFSA) www.plasticsinfo.co.za	▸ Organisation that coordinates, develops and promotes the interests of the South African plastics industry ▸ Members include Sasol Polymers and Safripol, Plastics Converters Association	David Hughes Tel: +27 11 314 4021 enquiries@plasfed.co.za
Plastics Converters Association (PCA)	▸ Represents plastics conversion sector ▸ Provides access to technical support, material and machine sourcing and other information through the technical department at the Plastics Federation ▸ Networking and information sharing	Mike Bullock Tel: +27 11 314 4021 ext 113 mikeb@pcasa.co.za
Plastics Institute of Southern Africa (PISA) www.ipsa.org.za	▸ Advance the standards and methods of education in the fields of plastics and polymers	Bob Bond Tel: +27 11 704 2056 Email
Association of Rotational Moulders of South Africa (ARMSA)	▸ Provides a forum for plastics converters in the South African rotational moulding industry	Gary Lategan Tel: +27 11 653 4798 pward@plasfed.co.za
Southern African Plastic Pipe Manufacturers Association (SAPPMA) www.sappma.co.za	Represent the interests of the plastic pipe industry in Southern Africa, focusing on: ▸ Product quality and standards ▸ Technical information ▸ Market education ▸ Environment and ethics	Jan Venter Tel: +27 11 314 4021 janventer@3gi.co.za
Toolmaking Association of South Africa (TASA)	▸ Provides support to the tools, dies, and moulds industry, and the National Tooling Initiative	Dirk van Dyk dirkvd@ntipweb.co.za
National Association of Automotive Component & and Allied Manufacturers (NAACAM) www.naacam.co.za	▸ Represents the interests of automotive component manufacturing industry in South Africa as well as companies involved in the importation and distribution of new motor vehicles in South Africa	Roger Pitot Tel: +27 11 454 0250 roger@naacam.co.za

Industry associations		
Automotive Industry Export Council (AIEC) www.aiec.co.za	Promotes sector exports, working together with TISA to: ▸ Promote South African automotive manufacturing capability ▸ Promote trade through trade missions with South African companies to potential export markets ▸ Identify new markets and additional opportunities in existing markets through investigations and research	Norman Lamprecht Tel: +27 12 323 2980 norman@naamsa.co.za
National Association of Automobile Manufacturers of South Africa (NAAMSA) www.naamsa.co.za	▸ Represents the interests of new motor vehicle manufacturing industry in South Africa as well as companies involved in the importation and distribution of new motor vehicles in South Africa	Nico Vermeulen Tel: +27 12 323 2980 naamsa@iafrica.com
Packaging Council of South Africa (PACSA) www.packagingsa.co.za	▸ Represents packaging industry, focusing on environmental sustainability (recycling, reuse and recovery)	Andrew Marthinusen Tel: +27 21 11 463 9909 packagec@mweb.co.za
Institute of Packaging South Africa (IPSA) www.ipsa.org.za	Promote the development of the art, science and technology of the packaging industry through: ▸ Advances in standards and methods of education through development of educational material ▸ Founding or managing scholarships, prizes and training grants ▸ Assistance in co-operation and exchange of knowledge and expertise through conferences and seminars	Henry Willis Tel: +27 11 782 0233 secretary@ipsa.org.za
Consumer Goods Council of South Africa (CGCSA) www.cgcsa.co.za	▸ Deals with best practice, standards and legal and regulatory issues in the retail, wholesale, manufacturing and service providers in the consumer goods industry	Tel: +27 11 789 5777 info@cgcsa.co.za
Polypropylene suppliers and compounders		
Sasol Polymers www.sasol.co.za	▸ Produces polypropylene and low-density polyethylene	David Mokomela Tel: +27 11 790 1400 david.mokomela@sasol.com
Safripol	▸ Produces polypropylene and high-density polyethylene	Bernhard Mahl Tel: +27 11 575 0149 bmmahl@safripol.com
Plastamid www.plastamid.co.za	▸ Production of specialised compounds and engineering polymers	Stephen Mountain Tel: +27 21 590 1000 stephen.mountain@plastamid.co.za
Panacea www.panaceapolymers.co.za	▸ Production of specialised compounds and value-added polymers	Eben Lindeque Tel: +27 11 974 2180 info@panaceapolymers.co.za

FURTHER INFORMATION

These sections provide further detail to potential investors, which can be incorporated into the document in a variety of ways, depending on the format and media of the document, including:

- Inserts into hard copy brochures
- "Fact boxes"
- Expandable text or links for electronic documents

Further information: Polypropylene properties and applications

Polypropylene has been one of the fastest growing commodity polymers for several years, and is expected to **continue to grow at higher rates than other commodity polymers**, including polyethylene, polyvinyl chloride (PVC), polyethylene terephthalate (PET), and polystyrene (PS). New technological developments also allow PP to be used increasingly in **new applications**, for example wider use of clarified polypropylene and multilayer packaging for food and beverage containers and low-density foams in automotive components.

Polypropylene will also **continue to replace traditional materials** such as glass, wood, cardboard, and metal in certain applications due to **technical superiority and cost-effectiveness**. Concerns around environmental sustainability are also leading to **innovation in biodegradeable compounds** and composites with natural materials introduced into applications in the automotive industry to achieve higher recycling rates.

Polypropylene derives its versatility from the following properties:

- **Strength**: Polypropylene has a high strength-weight ratio in comparison to other polyolefins
- **Durability**:
  - High chemical resistance including resistance to most organic solvents
  - Many grades can withstand commonly-used sterilisation methods
  - Good fatigue resistance, leading to applications as living hinges
  - Usually not susceptible to environmental stress cracking
  - Good UV resistance
- **Clarity**: high clarity, greater than other polyolefins (except PET)
- **Barrier properties**: polypropylene is highly impermeability to water, and resistance to dirt and grease
- **Weight**: polypropylene is one of the lightest thermoplastics (at 0.9 g/ml)
- **Thermal properties**: polypropylene has one of the highest melting points of commodity thermoplastics

Due to its performance characteristics **Polypropylene can be used in a vast array of applications**:

- **Plastic packaging**: Flexible and rigid industrial and consumer packaging, including shrink-wrap films, textile bags, flexible food packaging, reusable crates, bottles for food, thin-walled containers, and caps and closures
- **Automotive components**: Interior, exterior, and underhood components including interior trim panels, consoles, instrument panel system, head impact system, fluid reservoirs, batteries and battery covers, bumper fascias and cladding
- **Appliance components and household goods**: Switches, lighting fittings, cabling, housings, linings and insulation for a range of household appliances, furniture, tableware, and containers

- **Building and construction materials**: Pipes, fittings, conduits, decks, fencing, outdoor furniture, flooring solutions including carpet backing, heavy-wear carpets, and loose rugs, inclusion into concrete and asphalt
- **Medical devices**: syringes, injectable drug vials, irrigation solution bottles, catheters, nose spray bottles and inhalators, packaging of drugs, sutures, meshes for hernia repairs, and orthotics and prosthetics

Further information: Grades offered by Sasol and Safripol and typical applications

Grade	Typical applications
Homopolymer grades	
General purpose injection moulding grades	▸ Domestic food containers ▸ Caps and closures ▸ General household articles ▸ Cosmetic and toiletry components ▸ Multi-cavity mouldings
High stiffness injection moulding grade	▸ Garden furniture ▸ Microwaveable trays ▸ Caps and closures
High flow injection moulding grade	▸ High tenacity yarns ▸ Staple fibre ▸ Needlepunched floor coverings ▸ Tufted carpets
Thin-walled injection moulding grade	▸ Atchar cups/food containers ▸ Thin-walled packaging ▸ Caps/dust covers ▸ Pharmaceutical containers ▸ Extrusion coating
Low flow extrusion grades	▸ Package strapping ▸ Slit tape: ropes, twines, and woven fabric, woven fabric for sacks, flexible bulk containers, carpet backing and mining applications
High flow extrusion grades	▸ Spunbond nonwovens: roof insulation, spring pockets (beds), diapers, feminine hygiene products ▸ Sewing thread, narrow weaving ▸ Woven bags
High flow extrusion grade for long spin applications	▸ Tufted carpets ▸ Sewing thread and narrow weaving
Impact copolymer grades	
Medium impact general purpose injection moulding grade	▸ Stadium seating/indoor furniture ▸ Caps and closures ▸ General household articles ▸ Cosmetic and toiletry components ▸ Small boxes and containers
Medium impact injection moulding grade with antistatic additives	▸ Cylindrical (paint) containers ▸ Stadium seating & furniture components ▸ Automotive battery cases & lids
High impact general purpose grade	▸ Buckets/pails ▸ Crates ▸ Transport containers
High impact injection moulding grade with antistatic additives	▸ Buckets/pails ▸ Tool cases ▸ Crates ▸ Transport containers ▸ Ice cream containers ▸ Shopping baskets ▸ Storage boxes ▸ Appliances ▸ Automotive battery cases

Grade	Typical applications
Random copolymer grades	
Clarified injection moulding grade	▸ Houseware ▸ Cosmetic containers ▸ High clarity bottles and other food containers ▸ Stationery items
High flow extrusion grade	▸ Cement bags ▸ Bulk bags ▸ Grain bags

Further information: Education and training institutions

Science councils	
Agricultural Research Council (ARC)	
Council for Geoscience (CGO)	
Council for Mineral Technology (Mintek)	
Council for Scientific and Industrial Research (CSIR)	▶ **Manufacturing and Materials Technology unit** ▶ **National Product Development Centre**
Human Sciences Research Council (HSRC)	
Medical Research Council (MRC)	
National Research Foundation (NRF)	
South African Bureau of Standards (SABS)	
Universities and universities of technology	
Cape Peninsula University of Technology	▶ **Rapid Prototyping Centre** ▶ Qualifications in **Plastics Technology**
Central University of Technology, Free State	▶ Centre for **Rapid Prototyping & Manufacturing** ▶ Qualifications in **Mechanical Engineering**
Durban University of Technology	▶ **Reinforced & Moulded Plastics Technology Station** ▶ Qualifications in: – **Mechanical Engineering** – **Chemical Engineering**
Mangosuthu Technikon	
Nelson Mandela Metropolitan University	▶ **Polymer Chemistry Research Group** ▶ Qualifications in **Mechanical Engineering**
North-West University	
Rhodes University	
Stellenbosch University	▶ **Institute for Polymer Science** ▶ **Global Competitiveness Centre** ▶ Qualifications in: – **Polymer Science** – **Chemistry**
Tshwane University of Technology	▶ **Centre for Polymer Technology** ▶ Qualifications in **Polymer Science**
University of Cape Town	▶ **Centre for Materials Engineering** ▶ **Centre for Research in Computational and Applied Mechanics** ▶ **Finite Element Analysis Centre** ▶ Qualifications in: – **Mechanical Engineering** – **Chemical Engineering**
University of Fort Hare	
University of Johannesburg	▶ **Centre for Nanomaterials Technology** ▶ Qualifications in **Chemistry**
University of KwaZulu-Natal	▶ **Centre for Material Research** ▶ Qualifications in **Mechanical Engineering**
University of Limpopo	
University of Pretoria	▶ **Institute of Applied Materials** ▶ Qualifications in **Chemical Engineering**
University of South Africa	
University of the Free State	
University of the Western Cape	

Science councils	
University of the Witwatersrand	▸ **Reinforced Plastics & Composites Facility** ▸ Qualifications in: – **Chemical Engineering** – **Chemistry**
University of Venda	
University of Zululand	
Vaal University of Technology	▸ **Materials and Processing Technologies Technology Station** ▸ Qualifications in **Chemical Engineering**
Walter Sisulu University for Technology and Science	

Public Further Education and Training (FET) Colleges
Eastern Cape: Port Elizabeth FET College, East Cape Midlands FET College, Buffalo City FET College, Lovedale FET College, King Sabata Dalindyebo FET College, Ingwe FET College, Ikhala FET College King Hintsa FET College
Free State: Goldfields FET College, Motheo FET College, Maluti FET College, Flavius Mareka
Gauteng: Tshwane South FET College, Tshwane North FET College, Ekurhuleni West College, Ekurhuleni East FET College, South West FET College, Central Johannesburg Western College FET, Sedibeng FET College
KwaZulu-Natal: Mthashana FET College, Umfolozi FET College, Majuba FET College, Mnambithi FET College, Elangeni FET College, Coastal FET College, Thekwini FET College, Umgungu-ndlovu FET College, Esayidi FET College, Lephalale FET College, Capricorn FET College, Waterberg FET College, Vhembe FET College, Mopani South East FET College, Letaba FET College, Sekhukhune FET College
Mpumalanga: Ehlanzeni FET College, Nkangala FET College, Gert Sibande FET College
Northern Cape: Northern Cape Urban FET College, Northern Cape Rural FET College
North West: Taletso FET College, Vuselela FET College, Orbit FET College
Western Cape: West Coast FET College, Boland FET College, South Cape FET College, Northlink FET College College of Cape Town FET College, False Bay FET College

Further information: South Africa’s Broad-based Black Economic Empowerment

Broad-based Black Economic Empowerment policy

Broad-based Black Economic Empowerment (BBBEE) has been adopted by the South African government as a policy to **promote effective participation by the majority of South Africans in the economy**.

The Broad-based Black Economic Empowerment Act, 2003, encourages economic empowerment of all black people including women, workers, youth, people with disabilities, and people living in rural areas, through:

- Increasing the number of black people that manage, own and control enterprises and productive assets
- Facilitating ownership and management of enterprises and productive assets by communities, workers, cooperatives and other collective enterprises
- Human resource and skills development
- Achieving equitable representation in all occupational categories and levels in the workplace
- Preferential procurement
- Investment in enterprises that are black-owned or managed

The Act stipulates that every government department and publicly-owned entity must take into account, and apply, the relevant Code of Good Practice in its engagement with the private sector. Government will therefore use the Code of Good Practice to measure the BBBEE performance of companies with which it does business.

The **Codes of Good Practice** on Black Economic Empowerment provide clarity on BBBEE, including further definition of BBBEE, definition of different categories of black empowerment entities, qualifying criteria, measurement indicators, and weighting of such indicators. There are **seven elements of BBBEE which are measured in the generic scorecard**:

- **Ownership** – the effective ownership of enterprises by black people
- **Management** – the effective control of enterprises by black people
- **Employment equity** – initiatives intended to achieve equity in the workplace under the Act and the Employment Equity Act
- **Skills development** – the extent to which employers carry out initiatives designed to develop the competencies of black employees
- **Preferential procurement** – the extent to which enterprises buy goods and services from suppliers with strong BBBEE performance
- **Enterprise development** – the extent to which enterprises carry out initiatives intended to assist and accelerate the development and sustainability of other enterprises
- **Socio-economic development** – the extent to which enterprises carry out initiatives that contribute towards socio-economic development or sector-specific initiatives that promote access to the economy for black people

The **generic scorecard sets different target levels for each of these elements**, and accords each of these elements different weightings, as demonstrated in the table below:

Broad-based Black Economic Empowerment elements and weightings

Element	Weighting (total 100)
Ownership	20
Management control	10
Employment equity	15
Skills development	15
Preferential procurement	20
Enterprise development	15
Socio-economic development initiatives	5

Based on the overall performance of a company against this generic scorecard, the company is accorded a BBBEE status (Level 1 – Level 9, with Level 1 being the best BBBEE performance).

The Government scorecard distinguishes between large enterprises and qualifying small enterprises, and the Codes set out a scorecard specifically for small enterprises (defined as any enterprise with an annual total revenue of between R5m and R35m). Qualifying small enterprises must select any of the seven elements of BBBEE for the purposes of measurement.

The Codes of Good Practice **recognise that some multi-national companies (MNCs) in South Africa experience constraints with respect to the sale of equity in their South African operations**, and offer MNCs that are precluded by a global practice from the sale of shares an **alternative means of contributing towards the ownership element**. Instead of the sale of shares, MNCs are given the opportunity to apply for recognition of “equity equivalent” programmes, which are broadly defined as promoting socio-economic development of South Africa, and include programmes that:

1. Support ASGISA (Accelerated & Shared Growth Initiative for South Africa)
2. Support JIPSA (Joint Initiative for Priority Skills)
3. Support the National Skills Development Strategy
4. Promote enterprise creation in respect of cooperatives, small enterprises, and enterprises that are more than 50%-owned by black people, more than 30%-owned by black women, and more than 50%-owned by members of black designated groups
5. Promote social advancement

This **enables South African operations of MNCs** to compete on an equal footing with counterparts operating within South Africa.

The BBBEE Act also makes provision for government to issue further Codes of Good Practice or charters which are specific to economic sectors. To date, there is no chemicals sector BBBEE charter.

Further information: Requirements to establish and operate a business in South Africa

Establishing and operating a business

Businesses may take the following forms of entities in South Africa:

1. **Private and public companies** (regulated by the Companies Act 61 of 1973): Companies exist as separate entities from their shareholders and members, and are required to be audited by a registered accountant and auditor. Further requirements include:
   - Private companies may not sell shares to the public, and the right to transfer shares is restricted. They are not required to submit their annual financial statements to the Registrar of Companies.
   - Public companies may offer shares for sale to the public but do not have to be listed on the stock exchange. There are no restrictions on the transfer of shares, and annual financial statements must be submitted to the Registrar of Companies and are available for public inspection.

2. **Local branch of a foreign company**: Any foreign company can operate in South Africa without forming a locally incorporated company (apart from banks and insurance companies). Branches must be registered as external companies within 21 days of establishing a place of business in South Africa. A South African resident must be appointed to act as a legal representative, and locally-audited financial statements as well as financial statements prepared in the country of incorporation must be submitted to the Registrar of Companies.

3. **Close corporations** (regulated by the Close Corporation Act 64 of 1984): members must be natural persons (up to 10 members are allowed), and there is no distinction between the ownership and management structures of the corporation. Members enjoy the protection of limited liability, and statutory audits are not required. However, an accounting officer must produce an annual report stating agreement between financial statements and the accounting records. A company may be converted to a close corporation and vice versa.

4. **Partnerships and sole traders**: subject to few statutory requirements (e.g. registration is not required, neither are financial statements) but do not have the protection of limited liability.

5. **Business trusts** (regulated by the Trust Property Controls Act of 1988): are not required to produce financial statements, and there are no restrictions on the number of trustees and beneficiaries. Nominated trustees can carry on a business on behalf of the trust's beneficiaries, once authorisation has been granted by the Master of the High Court. A trust has no legal personality of its own except for tax purposes.

Requirements for establishing main business entities in South Africa

<table>
<tr><th>Business entity</th><th>Overview of current requirements</th><th>Major cost items</th><th>Turnaround time</th><th>Administering entity</th></tr>
<tr><td>Private company (Pty Ltd)</td><td rowspan="2">▸ Memorandum of Association
▸ Articles of association and incorporation
▸ Certificate to commence business
▸ Statement by directors regarding share capital
▸ Consent to act as auditor</td><td rowspan="2">▸ Forms and revenue stamps: R300
▸ Legal and other professional fees: min of R4,500
▸ Memorandum of incorporation and association: min R350 (plus R5 per R1,000 of share capital)</td><td rowspan="2">3-5 business days</td><td rowspan="3">Registrar of Companies (Company and Intellectual Property Registration Office – CIPRO)</td></tr>
<tr><td>Public company (Ltd)</td></tr>
<tr><td>External company</td><td>▸ Notice of legal representatives of company
▸ Details of directors (SA and foreign)
▸ Consent to act as auditor
▸ Certificate of registration</td><td>▸ Certificate of registration: R350</td><td>3-5 business days</td></tr>
<tr><td>Close corporation</td><td>▸ Reservation of company name
▸ Founding statements</td><td>▸ Total cost of R150 for both steps</td><td>5-8 business days</td><td>Registrar of Close Corporations (CIPRO)</td></tr>
<tr><td>Income tax registration</td><td>▸ Application for registration as a tax payer</td><td>▸ No costs involved</td><td>10 business days</td><td>South African Revenue Service (SARS)</td></tr>
</table>

The Companies Act of 1973 is expected to be replaced shortly by a modernised Companies Act during 2008. The stated objectives of the 2007 Companies Bill include to:

- Simplify the company registration system
- Create flexibility in corporate finance
- Provide for better corporate governance and redress
- Reduce the compliance burden on companies
- Decriminalise companies legislation

Tax rates

- **Basic company tax rate: 29%**
- Tax on dividends at the company level: 10%
- Value Added Tax (VAT), applied to most products:14%

Companies that are not registered in South Africa, but do business via a branch, are **taxed on branch profits at 35%.**

Environmental legislation and agreements that may relate to establishing or operating a business

National Environmental Management Act, 1998: authorities at national and provincial levels are empowered to identify and regulate activities that require environmental authorisation prior to commencement or areas in which specified activities may not be commenced without pre-authorisation

The Environment Conservation Act, 1989: addresses protected natural environments, waste management provisions, limited development areas, regulations on noise, vibration and shock, general regulatory powers and various provisions relating to offences and penalties. It provides regulation on Environmental Impact Assessments (EIAs), which are required for certain activities.

In 2003 **levies and restrictions on the sale of plastic bags** by retailers were brought into effect under the Environment Conservation Act, to decrease waste and encourage recycling. The South African public have been responsive to the levy, cutting down on the purchase of plastic bags.

The National Water Act: controls pollution of water sources, including permissible levels of chemicals in discharged wastewater, regulates water use, water use charges, and the protection of water resources

The National Environment Management: Air Quality Act, 2004: places responsibility on metropolitan and district municipalities to issue emission licenses for certain activities, and provides for penalties for non-compliance

South Africa is also a signatory to the following **multilateral agreements**:

- **Basel Convention**: aims to protect human health and the environment against the adverse effects resulting from the generation, management, transboundary movements and disposal of hazardous and other wastes
- **Montreal Protocol**: aims to phase out the use of ozone-depleting substances
- **Clean Development Mechanism (CDM)** (part of Kyoto protocol): as a signatory to the Kyoto Protocol, South Africa is entitled to take advantage of the opportunities presented by the Clean Development Mechanism. The CDM permits developing countries to earn carbon credits, which can then be traded for financial gain. The Department of Minerals and Energy functions as the designated national authority in South Africa and assesses potential CDM projects to determine whether they will assist South Africa in achieving its sustainable development goals. At present, its focus is on developing an approval process for potential CDM projects. However, in future it will also provide support to project developers and participate in promoting South Africa as an attractive location for potential CDM investors.
- **Cartagena Protocol** on Biosafety
- **Stockholm Convention** on Persistent Organic Pollutants
- **Rotterdam Convention** on the Prior Informed Consent procedure for certain hazardous chemicals and pesticides in international trade

Further information: Availability of finance

Financing is available through a range of institutions, including Development Finance Institutions, private banks, and venture capital firms:

- The **Industrial Development Corporation** (IDC) offers debt and equity funding through the Chemicals, Textiles and Allied Industries, Metal, Transport and Machinery, and 2010! and Construction strategic business units, and aims to fund R7bn to R8bn per year by 2010
- The **Development Bank of Southern Africa** (DBSA) provides loan finance for large projects (more than R10m)
- **Ithala Development Finance Corporation** finances projects in KwaZulu-Natal Province
- **National Empowerment Fund** provides capital for BBBEE transactions
- South Africa’s **private banks** offer debt and equity financing
- The **Southern African Venture Capital and Private Equity Association** (SAVCA) has 61 full members and 25 associate members, representing 350 professionals in the industry with over R45bn in assets under management
- The **Johannesburg Securities Exchange** (JSE) had market capitalisation of US$806,691m in April 2007, (ranking 19th according to the World Federation of Exchanges), and liquidity was 36.6% (ranking 36th according to the World Federation of Exchanges)

List of acronyms

AGOA	Africa Growth and Opportunities Act
AIDC	Automotive Industry Development Centre
AIEC	Automotive Industry Export Council
ARMSA	Association of Rotational Moulders of South Africa
ASGISA	Accelerated and Shared Growth Initiative for South Africa
BBBEE	Broad-based Black Economic Empowerment
CAGR	Compound Annual Growth Rate
CAIA	Chemical and Allied Industries Association
CCMA	Council for Conciliation, Mediation and Arbitration
CDM	Clean Development Mechanism
CETA	Construction Education and Training Authority
CGCSA	Consumer Goods Council of South Africa
CHIETA	Chemicals Industry Education and Training Authority
CIPRO	Company and Intellectual Property Registration Office
CSIR	Council for Scientific and Industrial Research
CTFL SETA	Clothing, Textiles, Footwear and Leather Sector Education and Training Authority
DBSA	Development Bank of Southern Africa
DST	Department of Science and Technology
the dti	Department of Trade and Industry
ECDC	Eastern Cape Development Corporation
EFTA	European Free Trade Association
EIA	Environmental Impact Assessments
EMIA	Export Marketing & Investment Assistance Scheme
EPA	Economic Partnership Agreement
EU	European Union
FET	Further Education and Training
FIG	Foreign Investment Grant
FMCG	Fast-moving Consumer Goods
FRIDGE	Fund for Research into Industrial Development, Growth and Equity
FSDC	Free State Development Corporation
GDP	Gross Domestic Product
GEDA	Gauteng Economic Development Agency
GSP	Generalised System of Preferences
HDPE	High Density Polyethylene
IBSA	India-Brazil-South Africa
ICT	Information and Communication Technology
IDC	Industrial Development Corporation
IDZ	Industrial Development Zone
ILAC	International Laboratory Accreditation Cooperation
INW	Invest North West
IPAP	Industrial Policy Action Plan
IPSA	Institute of Packaging South Africa
ISETT SETA	Information Systems, Electronics and Telecommunications Technologies Sector Education and Training Authority
ISO	International Organisation for Standardisation
ITAC	International Trade Administration Commission
JIPSA	Joint Initiative for Priority Skills Acquisition
JSE	Johannesburg Securities Exchange
LDPE	Low Density Polyethylene

MAPPP SETA	Media Advertising Print Publishing and Packaging Sector Education and Training Authority
MEGA	Mpumalanga Economic Growth Agency
MERSETA	Manufacturing, Engineering and Related Services Sector Education and Training Authority
MIDP	Motor Industry Development Programme
MNC	Multi-National Company/Corporation
NAACAM	National Association of Automotive Component and Allied Manufacturers
NAAMSA	National Association of Automobile Manufacturers of South Africa
NEDLAC	National Economic Development and Labour Council
NEF	National Empowerment Fund
NIPF	National Industrial Policy Framework
NDPC	National Product Development Centre
OEM	Original Equipment Manufacturer
PACSA	Packaging Council of South Africa
PCA	Plastics Converters Association
PET	Polyethylene terephthalate
PFSA	Plastics Federation of South Africa
PISA	Plastics Institute of Southern Africa
PVC	Polyvinyl Chloride
PS	Polystyrene
PTFE	Polytetrafluoroethylene
R&D	Research and Development
SA	South Africa
SACU	Southern African Customs Union
SADC	Southern African Development Community
SANAS	South African National Accreditation System
SAPPMA	Southern African Plastic Pipe Manufacturers Association
SARS	South African Revenue Service
SAVCA	Southern African Venture Capital and Private Equity Association
SETA	Sector Education and Training Authority
SMEDP	Small and Medium Enterprise Development Programme
SMME	Small, Medium and Micro Enterprise
SPII	Support Programme for Industrial Innovation Fund
TASA	Toolmaking Association of South Africa
TDCA	Trade and Development Cooperation Agreement
THRIP	Technology and Human Resources for Industry Programme
TIKZN	Trade & Investment KwaZulu-Natal
TIL	Trade & Invest Limpopo
TISA	Trade and Investment South Africa
UNESCO	United Nations Educational, Scientific and Cultural Organisation
US	United States of American
UV	Ultra-violet