

# POLYMERS TECHNOLOGY SERVICES CENTRE



The Polymer Technology Services Centre (PTSC) provides polymer chemistry support for the production plants as well as polymer characterisation services to both internal and external customers.

## Background

The Polymer Technology Services Centre (PTSC), which houses key polymer technical resources under one roof, was constructed 1998 in Founders View, Modderfontein, and was officially opened in January 1999.

## Expertise

Today, the Analytical Services, Applications Research and Support and the Polymer Technical Services teams are based at the Centre.

### Analytical Services:

- Techniques available include gel permeation chromatography, thermal analysis, physical testing and rheology, as well as the state of the art high-throughput Gas Chromatograph with Time-of-Flight Mass Spectrometer (GC-TOF-MS) a technique capable of providing migration testing to measure maximum permissible additive levels in polymer packaging used in food contact applications such as food containers for microwave use;
- Industrial size conversion equipment includes PE film extruders, PVC pipe extruder, PP injection and PE roto moulders;
- Testing for various properties of polymer and end-products to determine the suitability for end user application;
- Autoclave units for the laboratory synthesis of PE and PP. These are used as tools for the understanding of PP catalyst/donor systems and resultant polymer properties, raw material selection (e.g. solvents) and monomer fit for purpose testing.

### Applications Research and Development:

The primary activities of the team include:

- Coordination and assisting in product development activities (i.e. formulation studies, product development and optimization (additive packages and product formulations/recipes) to support business strategies and plant performance;
- Product solutions that deliver opportunities to improve or optimise product quality, reduce costs and ensure that raw materials and additives used comply with applicable regulatory requirements;
- Technical support throughout the value chain (e.g. Operating Hubs, Marketing & Sales, Technical Services, Product Stewardship, Quality Assurance and Supply Chain).

### Polymer Technical Services:

The Polymers Technical Services team provides value adding technical support to Sasol's customers through:

- Specialist product and process support on the use of Sasol's polymer grades and to derive maximum benefits thereof;
- Identification and implementation of suitable Sasol grades as alternate to imports and other competitive materials;
- Resolution of process, quality and efficiency problems at customers and provision of innovative technical solutions to enable successful conversion of Sasol's polymer grades;
- Provision of formulating assistance to optimise product formulations and processing in order to reduce costs and improve efficiencies.