

## our values

### Safety:

We are committed to zero harm and all that we do, we do safely.

### People:

We create a caring, engaged and enabled work environment that recognises both individual and team contributions in pursuit of high performance.

### Integrity:

Integrity is about acting consistently on a set of values, ethical standards and principles.

### Accountability:

We take ownership of our behaviour and responsibility to perform both individually and in teams.

### Stakeholder focus:

We serve our stakeholders through quality products, services and value creation.

### Excellence in all we do:

We deliver what we promise and add value that goes beyond what is expected.

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Our engineering department comprises 600 engineers in various engineering disciplines which include:

- **Process engineering:** specialised technological knowledge in gas processing (reforming, hydrocarbon synthesis and integration), gas production and Tar processing, Phenosolvan and Sulphur recovery (TPS), refineries, utilities (power & steam and water & ash), catalysis, chemicals production, modelling and process design;
- **Mechanical engineering:** static, proprietary and rotating equipment, expertise in welding, Quality Assurance / Control and piping as well as metallurgy and corrosion, materials handling and non-metallics;
- **Control engineering:** instrumentation (including detail design), process automation systems, process control and optimisation, Quality Assurance / Control and commissioning;
- **Electrical engineering:** specialist knowledge of a broad range of unique electrical engineering designs and application, advice on the selection of equipment for use in flammable atmospheres, a wide range of electrical power system studies – fault-level, load flow, stability, electrical infrastructure (design and optimisation) and Quality Assurance / Control as well as construction support and commissioning;

- **Civil engineering:** geotechnical and foundation engineering, earth structures and earth reinforcement, structural and transportation (roads, railways and paved areas) engineering as well as building architecture, alternative materials, heating, ventilation and air conditioning; and
- **Decision support:** using stochastic, system dynamics modelling, optimisation modelling, process integration and knowledge management.

Furthermore, we offer specific experience in unit operations including distillation, heat transfer, rotating equipment, PSV and flare systems, static equipment (vessels, filter, etc) and solids handling.

Our expertise in **project management** includes:

- more than 40 project managers experienced in large projects; and
- 70 project managers experienced in medium-sized projects.

In addition, our **project execution** expertise includes:

- project planning and estimation;
- cost control;
- construction management;
- document control; and
- commissioning engineers.

### Did you know?

- In 2006, Sasol initiated its 10-year University Collaboration Initiative, worth R250 million, to build competency in science and chemical engineering and to improve the quality of research and teaching facilities in these disciplines, to ensure a long-term supply of highly trained postgraduates for Sasol as well as for other South African industries and universities.

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sasol  
reaching new frontiers



Sasol Technology  
**technical skills  
and expertise**



## our role

Mandated to ensure that Sasol's technology advantages are optimised and maximised for the benefit of all its businesses, Sasol Technology manages Sasol's research and development, technology management and innovation, engineering services and project management portfolios.

We play a vital role in enabling Sasol's growth and sustainability as we direct, acquire, commercialise, install and optimise technology for the group.

We add value through leadership in technology innovation and commercialisation, through delivering on world-class capital projects, and through the delivery of cleaner technologies.

We also help Sasol's fuels and chemicals businesses to maintain growth and competitive advantage through optimised technology solutions and services.

This requires highly skilled human capital, the application of sound engineering principles and scientific research methodologies that utilise a suite of advanced synthetic, analytical and modelling techniques, and state-of-the-art laboratory and pilot-scale research facilities.



## Did you know?

- Sasol Technology is rated as a top company to work for by scientists, researchers and engineers.
- The company employs 2 200 technical and support professionals across its South African locations in Sasolburg, Secunda, Rosebank and Cape Town.
- A smaller portion of its workforce is based across the 14 international locations where it is active.
- Sasol has more than 500 PhDs in its workforce.

## our vision

To be recognised for consistent excellence in innovation and delivery of cleaner technologies, enabling Sasol's growth and sustainability.

## our spheres of expertise

A sound understanding of the business strategies is required to effectively secure their growth and competitive advantage through an appropriate technology strategy. This is enhanced through technology development partnering, focused intellectual property risk identification and protection strategies, and competencies to license our own technology out and acquire the use of technologies provided by others.

Sasol Technology has expertise (both in-house and external) in the following technology areas:

- **Syngas generation:** including analysis and characterisation of coal and coal gasification;
- **Sasol Hydrocarbon Synthesis (Sasol HCS):** including catalyst development, slurry phase reactor technology and operations, fluidised bed reactor technology and operations, process scale-up, and advanced macro-kinetic and selectivity modelling;
- **Refinery technologies:** including processing of syncrude, hydrocracking, isomerisation and oligomerisation (Catpoly);
- **Chemical technologies:** including ligand and catalyst design, homogeneous and heterogeneous catalysis, separations technology, hydroformylation, ethylene oligomerisation and paraffin activation;
- **Analytical technologies:** including advanced analysis of hydrocarbon synthesis streams, atomic scale resolution characterisation of catalysts, molecular modelling of catalysts, application and development of statistical methodologies for process monitoring and experimental design;
- **Environmental science and engineering:** including water and waste water processing, atmospheric modelling and solid waste handling;

- **Alternative energy:** including the processing of terrestrial biomass as well as an emerging competence in concentrated solar, photovoltaics and energy storage; and
- **Support services:** including design and execution of small projects, operation of pilot-scale and semi-commercial pilot plant units covering a wide range of technologies, advanced process control systems and process safety management.
- **Fuels technology** includes both product applications research and plant/market product technical services on a range of products including transport fuels (petrol, diesel and jet fuel), industrial heating fuels, lubricants, gas, and road binding materials. Areas of expertise include new product and application development, product fit-for-purpose testing, alternative fuel development and certification, combustion research, exhaust emission testing, fuels blending, the interaction of fuels with fuel systems, and problem solving.

The **Sasol Fuels Application Centre (Sasol FAC)** in Muizenberg, Cape Town, is a state-of-the-art fuels application and emissions testing facility that includes heavy-duty and transient testing capability at a sea-level location.

In addition, research at the **Sasol Advanced Fuels Laboratory (Sasol AFL)** at UCT provides a fundamental understanding of the properties of Sasol's products.

