Pelchem has been a leading fluorochemical producer in the southern hemisphere for the past 34 years, through its understanding and innovative development of fluorine technology. Constantly seeking for new ways to improve processes and products, Pelchem is committed to offering quality and reliable products and services to our customers worldwide.

We are geared for the future through our Growth & Expansion Strategy which is premised on the establishment of new world class production infrastructure to transform Pelchem as one of the leading integrated Fluorochemicals Company globally.

I’d like to pay tribute to the strength and resilience of all employees and management who are committed to realizing the company’s clearly articulated strategic objectives, the quality of our market offering and the strong relationships with our stakeholders.

“We’re in your world”

Kindest regards

Mr. Ivan Radebe
Managing Director
mission

• To be the preferred supplier of commodity and specialty chemicals.
• Deliver on our promises, safely and in an environmentally responsible manner.
• Driving growth through Excellence, Innovation, Performance and Customer Focus.
• Deliver world class products and services reliably.

vision

Global Manufacturer and Supplier of Commodity and Specialty Chemicals

values

Safety – We put safety first and strive towards zero harm.

Integrity – We are ethical and trustworthy in our relationships with all stakeholders.

Innovation – We anticipate change and respond with creative solutions.

Reliability – We deliver quality products and services as agreed upon in a consistent manner.

Excellence – We deliver what we promise and add value that goes beyond what is expected.
Pelchem SOC Ltd established in 1984 is a wholly owned subsidiary of Necsa SOC Ltd, and is the sole producer and supplier of fluorochemicals in the Southern Hemisphere. With over thirty (30) years of fluorochemical excellence, Pelchem is positioned as a fluorochemical hub to add value to South African mined fluorspar of which the country has the largest reserves in the world. Pelchem has a portfolio of over fourteen (14) products exported to more than twenty five (25) countries globally.

Business Summary

Pelchem's surface fluorination technology is patented

A proprietary process is established to produce a fluorochemical monomer

Small Scale Production of MoF$_6$ commences for the Isotope Market

Pelchem Launches small scale production of perfluorodecalin for the cosmetics industry
Global Footprint

Pelchem has a portfolio of over fourteen (14) products exported to more than twenty five (25) countries globally.
Markets we serve

- Petroleum
- Electronics
- Plastics
- Steel
- Cosmetics
- Polymers
- Pharmaceutical
- Industrial Chemicals
As consumers our daily lives are affected by products which are manufactured from fluorochemicals. One of our key products is Anhydrous Hydrogen fluoride (AHF) and Hydrofluoric Acid (HF), these are basic raw materials used in a variety of both commercial and industrial applications and is produced from Calcium Fluoride (Fluorspar) and Sulphuric Acid.

Hydrogen Fluoride is used as a catalyst in the production of fuel. HF is also used in the production of Refrigerants, Agrochemicals, Pharmaceuticals, Fluoropolymer, Electronics, Glass and Steel.

Products
Hydrofluoric Acid
Perfluorodecalin

Pelchem produces and supplies Perfluorodecalin, an anti-aging active used in cosmetics to dissolve and deliver oxygen to the skin, reducing the appearance of wrinkles. Perfluorodecalin is also in use in medical applications such as wound healing and burn treatment because of its ability to dissolve high concentrations of oxygen.

Fluoromonomers and Fluorine Intermediates

Pelchem possesses the IP know-how, licenses, and human capital required to produce to various fluoromonomers and fluorine intermediates.
Xenon Difluoride (XeF₂)

XeF₂ is a highly isotopic and selective etchant material ideally suited to help create the structures required for Micro Electronic Mechanical Systems (MEMS) devices such as airbag sensors along with a range of other etching and cleaning applications.

XeF₂ is one of the most innovative MEMS structure release process with exceptional technical capabilities in terms of selectivity, undercut, temperature budget and stiction-free features.

Exported to over 50 destinations in the world, Pelchem remains one of the few suppliers globally.

Molybdenum Hexafluoride (MoF₆)

Pelchem produces MoF₆, one of only 2 suppliers globally. MoF₆ is used in the production of Mo⁹⁹, a radioisotope used in the detection of Cancer. Pelchem supplies this key material for use in alternative technology routes.
Fluorine Gas Mixtures

Pelchem produces Fluorine and Fluorine/Nitrogen gas mixtures. High purity Fluorine gas is the highest performance cleaning gas available which improves productivity on CVD tools, reduces energy consumption and the environmental impact.

Fluorine is exported for use in the Semiconductor and Pharmaceutical Sectors. Fluorine is supplied to customers in cylinders, cylinder bundles and tube trailers.
Pelchem offers a Surface Fluorination service which involves the modification of polymer surfaces using fluorine gas mixtures. This benefits are that it reduces gas permeation, plastic container panelling and improves adhesion characteristics of plastics, thus extending and diversifying the applications in which plastics can be used. Surface Fluorinated containers have become widely accepted for the packaging of agricultural chemicals, petrochemicals, automotive fuels, paint products, veterinary medicines, food products, household and industrial cleaners and medicinal products. Pipes are also Surface Fluorinated for the petrochemical industry.

The Surface Fluorination service is compliant to various permeability requirements such as USA DOT, ECE, ERA, CARB and is approved by FDA of the USA.

Pelchem is currently modularising its existing surface fluorination plant technology to offer packaged Modular Surface Fluorination Plants to customers. These plants can be customised according to the need, and will lead to significant cost and time savings for companies that require surface fluorination. Benefits include: On-site surface fluorination facility which saves on logistics, time and cost; customisable and is developed by Pelchem, with over 20 years’ experience in commercial surface fluorination.
Cylinder Assembly

Pelchem does gas cylinder assembly for new, refurbished and hydro-tested cylinders. This includes internal surface preparation of cylinders, internal inspection, fitting of valves, leak testing, preparation and passivation of cylinders.

Technical Advice and Safety Awareness

Pelchem offers technical advice and safety awareness training regarding the safe handling of our products to our customers.

Toll Manufacturing

Pelchem offers toll R&D and manufacturing of fluorochemicals for customers.
Safety, Health, Environment and Quality (SHEQ)

Responsible Care

Pelchem is signatory to the International Responsible Care initiative as administered by the Chemical and Allied Industry Association (CAIA) of South Africa. Responsible Care® is the global chemical industry’s environmental, health and safety (EHS) initiative to drive continuous improvement in performance and sustainability throughout the product life cycle, and requires adopting cooperative and voluntary initiatives of performance beyond legislative and regulatory compliance to build confidence and trust in the chemical industry that is essential to improving living standards and the quality of life.

Compressed Gas Association (CGA)

Pelchem is a member of The Compressed Gas Association, dedicated to the development and promotion of safety standards and safe practices in the industrial gas industry.

HF Industry Practices Institute (HFIPI)

Pelchem is a subscriber to technical and safety publications from the HF Industry Practices Institute (HFIPI) of USA. HFIPI develops and publishes recommended practices specific to the Hydrogen Fluoride (HF) Industry. HFIPI members recognize that sustaining the safety record for HF depends on active dissemination of technologies and the continual education of the entire industry.
Comite Technique European Du Fluor (CTEF)

Pelchem is a subscriber to publications of CTEF, the European working group on safety, transport and storage of Hydrogen Fluoride. CTEF represents the major producers and users of hydrogen fluoride and fluoride chemicals in Europe.

The Responsible Packaging Management Association of Southern Africa (RPMASA)

Pelchem is a patron member of The Responsible Packaging Management Association of Southern Africa (RPMASA), a non-profit organization with its focus on promoting safe packaging in the chemical and petrochemical industries. RPMASA is part of an International network of similar organisations and Africa’s only Industry representative to the UN Committee of Experts for Transport of Dangerous Goods and GHS.

Quality

Pelchem is an ISO 9001:2008 Certified Company.

Safety Health and Environmental (SHE)

Pelchem adheres to the Necsa SHEQ system which is based on OSHAS 18001:2011

Pelchem is an ISO 14001:2004 certified company.

Behaviour Based Safety

Pelchem employs a pro-active safety program PEARL (Pelchem Eliminating Accidents and Risks for Life) through task observations to reduce at risk behaviours and entrench a culture of safety.
Growth and Expansion

South Africa has the single largest deposits of Fluorspar estimated at 41 million tonnes, and is the raw material used for the production of fluorchemicals. However, the country only generates less than 0.5% of the value whilst it supplies 5% of world demand for Fluorspar. To that end, Pelchem has embarked on an Expansion & Growth strategy to increase its capacity to respond to growing market demand and ultimately driving the Government’s Fluorochemicals Expansion Initiative (FEI).
Project Thuthukani, the name given to the Expansion and Growth Strategy of Pelchem, is centred on an F-Complex capable of producing 30000 tons per annum of Hydrofluoric Acid (HF) Plant and commercially scaled downstream plants of high value fluorochemical products. Pelchem intends to Increase volumes of fluorspar beneficiated by over 700%, attract foreign investments and partnerships, create more than 900 jobs, create a critical mass of qualified and experienced people to support the growing fluorochemical industry.

Pelchem is in the process of seeking a partner to jointly develop the project with financial capacity, access to markets, timeous delivery of processes, vast experience in the fluorochemicals space and compliant to our needs our national requirements.
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