



moving forward



**FOCUSING ON  
OUR CUSTOMERS FIRST**

**DELIVERING  
INNOVATIVE TECHNOLOGY  
AND PRODUCTS**

**CREATING VALUE THROUGH  
SERVICE AND COLLABORATION**

**ACHIEVING SUPERIOR  
RESPONSIBLE CARE<sup>®</sup>  
PERFORMANCE**



# moving forward

NOVA Chemicals creates value by focusing on our customers first. We deliver innovative technology and products through service and collaboration which means we place high value on our relationships as well as our research and development.

As a leader in Responsible Care, we have an unwavering commitment to health, safety and the environment including stewardship of our products throughout their life cycles.

NOVA Chemicals and its employees practice a culture of dignity, respect, openness and honesty with one another and in the communities where we live and work.

We have a clear mission—sustainable leadership in the markets we serve—and a strong commitment to olefins and polyethylene as our core business.

Becoming part of the International Petroleum Investment Company (IPIC) in 2009 brings added strength and stability and creates new opportunities moving forward.



NOVA Chemicals will continue to move forward guided by three operating principles:

- Make products that deliver value to customers and society
- Operate safely with stewardship for the environment and natural resources
- Create economic opportunity for stakeholders and the communities where we live and work

### Customer-Focused...

Customers are central to NOVA Chemicals' business. We choose markets based on where our solutions and expertise create the most value — for customers. Customer needs drive our technology and product innovations, and close customer collaboration maximizes the value of our solutions. Our reputation and competitive edge are built on relationships, responsiveness and reliability — and these customer-focused qualities will be even more important moving forward.

To help our customers achieve success, we strive to know their business like we know our own. Our comprehensive product portfolio is backed by extensive industry knowledge and a best-in-class technical, commercial and customer service organization committed to delivering high-quality, efficient and profitable solutions.



### and Value-Driven

One word captures the essence of what NOVA Chemicals does and why: value. That idea goes far beyond delivering quality and bottom-line opportunity to customers. It includes our capabilities, relationships and market expertise. Simply put, every aspect of our business is value-driven.

“Our customers — and their customers — look for value in use. We don't just supply resins — we deliver leading-edge technology in a collaborative environment, with sincere, honest communication. That's how NOVA Chemicals stands out.”

John Siegrist, Vice President – Polyethylene Sales and Marketing

# sustainable leadership in the markets we serve:

## NOVA Chemicals / At a Glance

NOVA Chemicals is a leading producer of plastics and chemicals that make everyday life safer, healthier and easier. Our focus is on value creation and innovation achieved by collaborating with our customers and by leveraging our strengths in people, assets and technology. We serve global markets from our North American operations and lead in the areas of health, safety, environmental stewardship and sustainability through our commitment to Responsible Care.

NOVA Chemicals' innovative and proprietary Advanced SCLAIRTECH™ and gas-phase polyethylene technologies **ensure reliable, high-quality** products for customers.



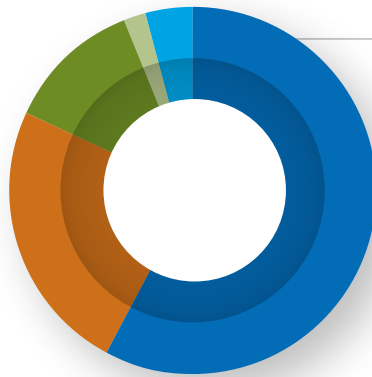
NOVA Chemicals' manufacturing facilities are **among the world's largest** and most energy efficient. The Joffre, Alberta manufacturing site is one of the largest ethylene and polyethylene complexes in the world.



SURPASS® and SCLAIR® polyethylene resins are produced using Advanced SCLAIRTECH™ technology to **create high-quality resins** with precise tailoring of product performance characteristics and enhanced processability to meet market needs.



Our high-density polyethylene barrier film resins can deliver up to a **30% reduction** in film gauge. In the North American barrier film market, a 10% reduction in film thickness **conserves 25 million pounds** of resin per year, reducing CO<sub>2</sub> emissions equivalent to nine million gallons of gasoline, and helping our customers — and their customers — to achieve sustainability goals.



### Polyethylene major markets

- Packaging
- Consumer & Institutional
- Building & Construction
- Transportation
- Other



Headquartered in Calgary, Alberta, with a Commercial Center in Pittsburgh, Pennsylvania, NOVA Chemicals employs nearly **2,500 people** at locations around the world.



Responsible Care companies improve their performance by implementing world-class practices. In areas such as spills, releases, safety incidents and waste generation, NOVA Chemicals has achieved reductions of more than **50%** over the past 10 years in Responsible Care performance.

# collaboration: focusing on our customers first



NOVA Chemicals' **CEO Randy G. Woelfel** brings over 30 years of industry experience to the role he took on in October 2009.



question & answer

## **NOVA Chemicals became part of the International Petroleum Investment Company (IPIC) in 2009. How does that impact NOVA Chemicals' future?**

First, NOVA Chemicals will be able to do more of what we do best. We create value by focusing on our customers and collaborating with them to develop innovative technology and products that meet market challenges. Our mission — sustainable leadership in the markets we serve — allows us to dedicate our resources to serving core customers in the polyethylene sector. That focus is rare — and it's a competitive strength.

At the same time, IPIC links us to a broader vision of global leadership and opens access to new opportunities, including collaborating with other world-class companies such as Borealis and Borouge. North America is still a great focus — with Calgary, Alberta as our corporate headquarters and Pittsburgh, Pennsylvania as our Commercial Center. IPIC's backing will help us accomplish far more than we could have before.

## **What are the company's biggest challenges?**

Near term, we believe that the North American polyethylene market will continue to be affected by global near bottom-of-cycle conditions due to the combination of variable speed economic recovery and the anticipated new global supply. So we need to continue to improve fundamental business performance, including structural enhancements to drive efficiency, strengthen and extend our access to competitive feedstock, and deliver value in every aspect of serving our customers.

### How would you describe the company's unique strengths?

Our business has a strong, stable foundation: dedicated people, established technology leadership, and world-class assets, including our western olefins and structural feedstock competitiveness. That, combined with our customer-focused culture, has led to excellent customer relationships and a reputation for bringing innovative solutions to the market, particularly in flexible packaging. Another strength is our leadership in Responsible Care: sustainability, health, safety and environmental stewardship. Clearly our connection to IPIC strengthens our position further — both in terms of resources and opportunities, and because IPIC's leadership is driven to build the world's best olefins/polyolefins business.

### How do you want customers to describe NOVA Chemicals?

That's the most important question! I meet with customers frequently, and most already describe NOVA Chemicals in ways that make me proud to be part of the organization. They describe us as knowledgeable, reliable, easy to do business with — a partner that has their best interests in mind. They say we listen to their concerns and develop innovative solutions to their challenges. They give us high marks for value and, just as importantly, they see us as a trustworthy organization that delivers on its promises. We have a lot to live up to — and to build on!



“Customers describe us as knowledgeable, reliable, easy to do business with — a partner that has their best interests in mind.”

innovation:



“ Technological expertise, state-of-the-art facilities, feedstock supply — that’s all part of delivering value to customers. But so is flexibility. From our superior capacity to tailor resins to our highly collaborative approach to research and development, NOVA Chemicals leads the way when it comes to customer-specific solutions.”

Daryll Harrison, Vice President – Technology

# delivering innovative technology and products

NOVA Chemicals has world-class manufacturing assets — but our industry leadership comes from our customer focus in leveraging those assets. By understanding customer needs and markets and collaborating to achieve highly responsive solutions, NOVA Chemicals consistently delivers innovative technology and products that create value.

## Assets

By maintaining some of the largest, most efficient manufacturing facilities in the global plastics and chemicals industry, NOVA Chemicals ensures the quality of our products and creates value for our customers. We are strongly committed to our established Canadian manufacturing base in Alberta and Ontario.

Our **Joffre, Alberta manufacturing site** is one of the largest ethylene and polyethylene production complexes in the world. Ethane, the primary feedstock for ethylene production, is extracted from natural gas in Alberta. That feedstock source, along with our investment in leading-edge equipment and experienced personnel, have made Joffre one of the industry's lowest-cost ethylene production centers. Our innovative, proprietary SCLAIRTECH and gas-phase polyethylene technologies ensure reliable, high-quality products for customers.

Strategically located in NOVA Chemicals' largest market for polyethylene products, our **Corunna, Ontario site** operates an ethylene flexi-cracker which can adjust feedstock mix between "heavy feeds" such as crude oil and "light feeds" such as ethane or propane. Most of Corunna's ethylene production is used to produce polyethylene resins that give customers the full range of performance characteristics needed for diverse end-use applications — from food packaging and films to industrial drums and pressure pipe. We are modernizing our eastern Canadian polyethylene assets, which will allow for the development of innovative, higher-value low-density polyethylene products.



## Technology

Continued success in commercializing innovative, new technology is the result of NOVA Chemicals' ongoing commitment to:

- Recruit and retain the industry's best and brightest professionals
- Maintain highly efficient, state-of-the-art research and technical service facilities
- Align research and development initiatives with customer challenges and opportunities to create value

NOVA Chemicals' best-in-class technical and customer service capability provides our customers with the confidence that they are getting the world's most advanced catalysts, process technology, products and polymer applications.

**Advanced SCLAIRTECH technology**, the most flexible linear low-density polyethylene technology available, produces high-performance polyethylene resins with an outstanding balance of performance attributes and processing benefits. Our proprietary single-site and **Ziegler-Natta** catalysts are the foundation of this technology and are used to produce our market-leading SURPASS and some SCLAIR polyethylene resins.

**SCLAIRTECH technology** leverages our Ziegler-Natta catalysts to deliver a broad and sophisticated range of SCLAIR polyethylene resins from a single reactor. Easily tailored to meet customer needs, SCLAIR resins' excellent processability characteristics lead to higher-value finished products compared to standard polyethylene.

Our proprietary **polyethylene catalyst technology**, including **NOVACAT**<sup>®</sup>, our family of advanced Ziegler-Natta catalysts designed specifically for gas-phase polyethylene reactors, is used in our manufacturing processes to produce a wide range of resin grades.





## Polyethylene Products

NOVA Chemicals' high-performance resins give our customers a competitive advantage by improving process and material efficiencies and enabling them to develop solutions that are more innovative, more cost-effective, and better performing. Product quality and reliability are essential and, as a customer-focused company, we also demand that our products create exceptional value for our customers, their customers, and the end-users.



**SURPASS** resins deliver a unique combination of properties not found in traditional polyethylene resins, helping customers excel in existing markets or enter new markets successfully. Film applications include food packaging, heavy-duty sacks and hygiene products. Injection molding applications include ice cream containers and packaging lids. Rotational molding applications include dumpsters and industrial storage containers.



**SCLAIR** resins, easily tailored to meet customer needs, deliver excellent overall processability and increased throughput. Their versatility makes them especially valuable in small-part blow molding, high-flow injection molding, and flexible packaging applications.

**NOVAPOL® Resins**, our original family of polymers, is one of the most trusted brands in the global polyethylene marketplace. Known for product consistency and reliability, NOVAPOL resins create value in a broad range of low-density, linear low-density and high-density polyethylene market applications.



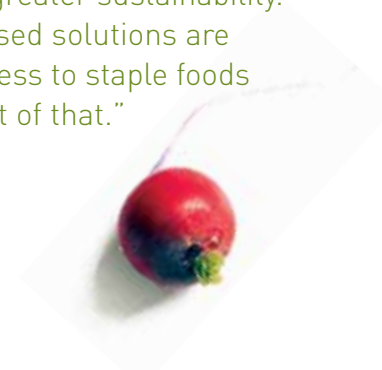


creating value:



“ Polyethylene drives many improvements in food supply and distribution — better safety, lower cost, greater sustainability. In developing countries, polyethylene-based solutions are transforming how people shop, their access to staple foods and their health. We’re proud to be a part of that.”

Debra van Holst, Global Business Director





## through service and collaboration

NOVA Chemicals' portfolio of polyethylene resins creates value in traditional markets such as film, injection, and rotational molding while elevating the performance of end-use products ranging from everyday household items to large-scale industrial applications.

**Polyethylene film packaging resins** produced by NOVA Chemicals deliver value to customers and society by ensuring the safety of food in consumer items found throughout the grocery store, including cereal liners and fresh produce, meat, cheese and poultry packaging. Industry-leading moisture-barrier performance also enables packaging designers to create thinner packaging, improving sustainability and yielding a wide range of performance benefits.

Our **polyethylene injection molding resins** drive value through process and material efficiencies, giving customers a competitive advantage in applications such as food packaging, pallets, crates, caps and closures. With an exceptional balance of toughness and stiffness, these resins give molders the ability to produce more parts using less resin and improve individual part strength.

Offering a rare combination of superior stiffness, toughness and processability, NOVA Chemicals' **rotational molding resins** facilitate customer applications not possible with resins from other manufacturers. Bridging the gap between traditional rotomolding resins and specialty engineering resins, our rotational molding resins enable molders to replace wood, metal and other materials with higher-performing plastics, benefitting both their business and the end user.



# value in additional markets

NOVA Chemicals' Performance Styrenics business invests in the research and development of high-performance polymers, including expandable polystyrene (EPS). The unique qualities of these polymers give our customers an advantage in their markets, helping them improve product performance while reducing costs and environmental impact.

## Performance Styrenics

As a leader in **EPS Technology and Applications** development, NOVA Chemicals works closely with customers to develop end-use products that are convenient, safe and cost-effective, while also delivering sustainability benefits such as material conservation and reduced greenhouse gas emissions.

**ARCEL® Advanced Foam Resins** offer excellent product protection properties, enabling customers to decrease the amount of packing material needed to protect their goods. This not only reduces waste, it also lowers packaging and logistics costs. The smaller, denser ARCEL cushion enables cube-down of package size, leading to a significant reduction in energy requirements and global warming potential for the life cycle of the package.

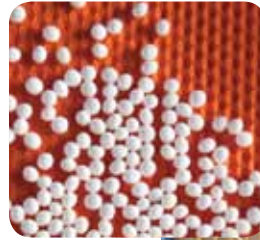
**QINNEX® Technology** allows unrelated plastic resins to work together to form new enhanced polymers, driving the development of sustainable products that help resin manufacturers, converters and prodders to diversify themselves in the marketplace.

**UPES® Resin**, a product of QINNEX Technology, is a next generation additive solution that broadens the processing window of most polyolefins, enabling higher throughput and creating source reduction and carbon savings opportunities while delivering a sustainable balance of performance and cost.



“ Sustainability initiatives are increasingly critical to business success. NOVA Chemicals supports our customers’ efforts in this area with robust performance styrenics offerings that create value by enhancing energy efficiency, reducing waste, and improving overall environmental performance.”

Bob Snyder, Vice President – Performance Styrenics



### INEOS NOVA

A 50:50 joint venture between NOVA Chemicals and INEOS Group Ltd., this global manufacturer of styrene and styrenic polymers serves customers throughout North America and Europe. INEOS NOVA’s broad range of polystyrene grades add value in multiple applications, including injection molding and extrusion processes. Innovative EPS applications in the joint venture’s European markets include products designed for use in construction and packaging, and other specialized fields.



commitment:





## achieving superior Responsible Care performance

NOVA Chemicals believes that “business value” and “value for people” can — and must — be integrated for the good of our customers, our company, and the global community. For more than two decades, we have adhered to Responsible Care standards and actively promoted them throughout the industry, leading the way in health, safety, sustainability and stewardship of our products.

### Sustainability

NOVA Chemicals is strongly committed to sustainability — for our business, but also by providing innovative products that help reduce waste and improve energy efficiency for our customers and society. We strive for continuous improvement in three critical areas:

- Environment — We believe that sound environmental stewardship and careful management of natural resources are fundamental to a sustainable business.
- Social — We develop and manufacture products that deliver value to our customers and make everyday life safer, healthier and easier.
- Economic — We create economic value for our stakeholders, including providing jobs, purchasing goods and services, and paying taxes in our communities.





### Environmental Compliance and Performance

As an industry leader in environmental stewardship, NOVA Chemicals has established comprehensive systems and procedures to continuously improve our environmental performance and protect the well-being of our communities. A critical element of our approach is tracking key performance indicators to assess progress in managing natural resources and reducing environmental releases, emissions and hazardous waste. A company-wide, cross-functional Responsible Care Council reviews our performance and establishes short- and long-term performance targets for a range of environmental indicators, including hazardous waste, atmospheric emissions, spills and releases, and community complaints.

### Product Stewardship

Product stewardship is the practice of making health, safety and environmental protection an integral part of the development, manufacturing, handling, use and end-of-life management of chemical and polymer products. To maximize product benefits while minimizing risks throughout the product life cycle, NOVA Chemicals engages in a full slate of product stewardship activities:

- Lead and support research to understand the potential health impacts of products before they are introduced to the marketplace.
- Participate in life cycle analysis of our polymer product families.
- Characterize, manage and communicate product hazard and risk information.
- Work with suppliers and carriers to ensure they safely handle, package and transport the raw materials required to manufacture our products.
- Engage our customers, carriers and distributors to work cooperatively in order to safely handle, use and dispose of our products.



“ NOVA Chemicals’ carbon capture program extracts CO<sub>2</sub> from our feedstock for enhanced oil recovery, annually capturing more than 150 kilotonnes — the equivalent of removing more than 28,000 passenger cars from our highways.”

Rick Van Hemmen, Site Leader – Manufacturing West, Joffre

### Employee Safety

NOVA Chemicals believes that all work-related illnesses and injuries can be prevented, and strives to foster a culture that values and promotes safe behaviors, on and off the job. Company-wide initiatives and programs are in place to raise awareness and educate employees about workplace safety. When an incident or injury does occur, we act immediately to control the situation and then investigate thoroughly, record findings and share the learning, including any resulting corrective actions that could minimize the risk of a recurrence.

### Process Safety

Effective management of manufacturing processes is crucial to the safe and efficient operation of NOVA Chemicals facilities. We implement stringent process safety programs and procedures to avoid uncontrolled manufacturing process events, including maintenance programs to minimize the risk of equipment failure, chemical detectors to identify hazardous conditions, and expert resources to rapidly and effectively respond if needed to any incidents.



“ NOVA Chemicals adopted a stretch of river near our headquarters in Calgary, Alberta. Employees and family members cleaned up the river banks to prevent damage to the waterways. The effort was part of the Great Canadian Shoreline Clean-Up, a national initiative designed to raise awareness and change attitudes about shoreline litter.”

Grant Thomson, Senior Vice President and President – Olefins & Feedstock



## Community

Both our mission and our Responsible Care commitment demand open communication and positive, long-term relationships with all stakeholders. We work hard to inform communities about facilities, operations and products, to understand and respond to concerns, and to seek input through community advisory panels, training programs, community forums, open houses and personal visits.

NOVA Chemicals also actively invests in the well-being of our communities, including supporting organizations that positively impact the quality of life where we work and live. In addition to investing in education and research, health and community services, and arts programs, we provide surplus computers, furniture and other gifts-in-kind to local organizations, and our employees are active through United Way Days of Caring and other outreach programs.

## Ethics and Compliance

Integrity and high ethical standards are fundamental to our culture, and are reinforced by our commitment to Responsible Care, our Business conduct Policy, and our Ethics and Compliance Program — a comprehensive program aimed at preventing violations of the law and of our ethical standards. Our goal is nothing less than 100% compliance — to behave ethically and do the right thing every time. That commitment is part of what defines us as a company, and it frames every interaction with customers and communities.

“NOVA Chemicals helped launch Responsible Care in 1985, and our commitment to those standards is stronger than ever. We are in business to make a difference — for customers, employees, communities, and millions of individuals who benefit from applications that start with our work.”

Randy G. Woelfel, CEO

[WWW.NOVACHEMICALS.COM](http://WWW.NOVACHEMICALS.COM)



#### Locations

##### Calgary, Alberta, Canada

NOVA Chemicals Head Office  
1000 Seventh Avenue S.W.  
P.O. Box 2518, Station M  
Calgary, Alberta  
Canada T2P 5C6  
Phone: 403.750.3600  
Fax: 403.269.7410

##### Pittsburgh, Pennsylvania, USA

U.S. Commercial Center  
Westpointe Center  
1555 Coraopolis Heights Road  
Moon Township, Pennsylvania  
USA 15108  
Phone: 412.490.4000  
Fax: 412.490.4155

##### Fribourg, Switzerland


Avenue de la Gare 14  
1700 Fribourg  
Switzerland  
Phone: 41.26.426.5757  
Fax: 41.26.426.5770

##### Shanghai, China

Room 2304, Chong Hing Finance Center  
No. 288 Nan Jing Rd., West Shanghai  
China, 200003  
Phone: 86.21.3366.3737  
Fax: 86.21.3366.3424

creative: Mizrahi, Inc.

#### Trademarks

 **NOVA Chemicals**<sup>®</sup> and **NOVAPOL**<sup>®</sup> are registered trademarks of NOVA Brands Ltd.; authorized use/utilisation autorisée.

Advanced **SCLAIRTECH**<sup>™</sup> and **SCLAIRTECH**<sup>™</sup> are trademarks of NOVA Chemicals.

**ARCEL**<sup>®</sup>, **NOVACAT**<sup>®</sup>, **QINNEX**<sup>®</sup> and **UPES**<sup>®</sup> are registered trademarks of NOVA Chemicals Inc.

**SURPASS**<sup>®</sup> and **SCLAIR**<sup>®</sup> are registered trademarks of NOVA Chemicals Corporation in Canada and of NOVA Chemicals (International) S.A. elsewhere.

**Responsible Care**<sup>®</sup> is a registered trademark of the Chemistry Industry Association of Canada (CIAC) in Canada and is a registered service mark of the American Chemistry Council (ACC) in the United States.

For more information, please see these websites:

[www.novachemicals.com](http://www.novachemicals.com)  
[www.novachemicals.com/Joffre](http://www.novachemicals.com/Joffre)

Chemistry Industry Association of Canada  
[www.canadianchemistry.ca](http://www.canadianchemistry.ca)

American Chemistry Council  
[www.americanchemistry.com](http://www.americanchemistry.com)



Printed on 20% post-consumer paper.