

Innovative Solutions for the Pipe Market

Our Global Capabilities





ABOUT US

LyondellBasell is one of the largest plastics, chemicals and refining companies in the world. Found in nearly every sector of the economy, the products and materials produced by LyondellBasell are key to advancing solutions like protecting the purity of water supplies through stronger and more versatile pipes.

With a nearly 70-year legacy of game-changing innovation, LyondellBasell is the world's largest licensor of polyolefin and polypropylene technologies and sells products into approximately 100 countries.

KEY COMPANY FACTS

CAPACITY POSITIONS* _____

#1

Licensor of **polyolefin technology** globally

Producer of **polypropylene compounds** globally

Producer of **polypropylene** in North America and Europe

Producer of **polyethylene** in Europe

LEADING _____



50 years of leadership and innovation in the pipe industry



Global Pipe and Infrastructure business, with sales and technical service teams in Europe, North America and Asia-Pacific

* 2017 data as of Dec. 31, 2017

ADVANCING MODERN INFRASTRUCTURE

As the world continues to modernize and the global population increases, there is an even greater demand for natural resources. Delivering them will require significant investment in infrastructure, including pipes to deliver water, gas, electricity and heating.

From distributing clean water to your communities, supplying natural gas to your homes or delivering electricity to your neighborhood, LyondellBasell's broad portfolio of polyolefin resins can be found in numerous pipe applications and markets.

- Piping systems for water, gas and industrial applications
- Piping systems for hot and cold water installations
- Piping systems for sewage and drainage
- Coating systems for steel pipes
- Conduit pipes

GLOBAL TRENDS



85%
urban population growth
by 2050



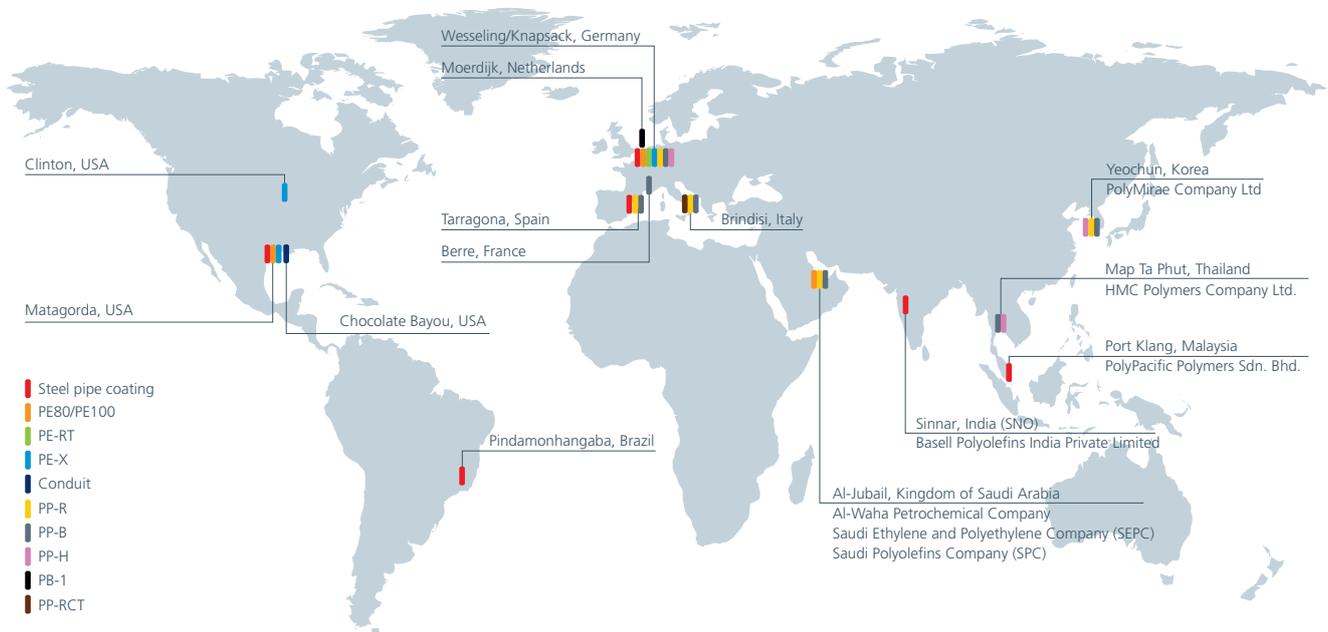
78 trillion
in global infrastructure investment
required over the next 10 years to
accommodate growth



Global growth will increase
demand for water and energy
by 40 and 50 percent
respectively by 2030

SCOPE AND SCALE TO SERVE THE WORLD

With 14 sites across 12 countries producing resins for pipe applications, LyondellBasell reliably delivers the innovative products our global customers need.



ADVANCING THE DELIVERY OF CLEAN WATER

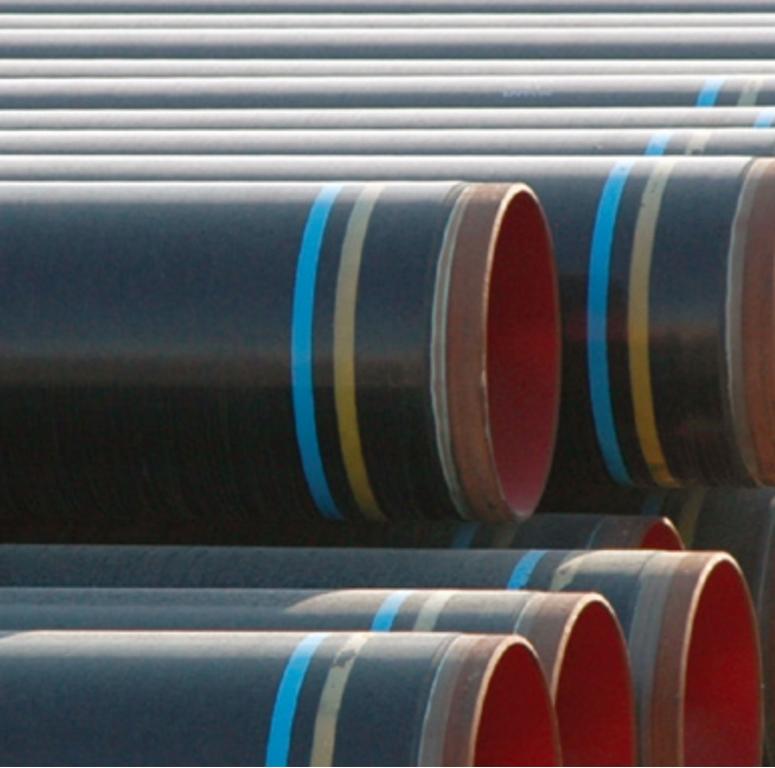
Since the production of the first *Hostalen* HDPE pipe grades in 1955, our range of products has expanded and upgraded to encompass a complete portfolio of polyolefin grades for the pipe market. Our resins are used in pipe applications throughout the water cycle, including water distribution, consumption and disposal.



Key applications:

- Pressure pipes for supplying water made from high density polyethylene
- Piping systems for hot and cold water installations made from PE-X, PE-RT, PP-R, PP-RCT and PB-1
- Sewage water pipes made from our polyethylene and polypropylene resins

All of the polyolefin solutions described above exhibit extensive durability, reliability and sustainability, with an expected service life of up to 100 years when properly designed, installed and operated per applicable international standards and practices. Our resins used in pipe applications enable sustainable and reliable water management solutions for generations to come.



PROTECTING OIL, GAS AND WATER TRANSPORTATION PIPELINES

LyondellBasell offers a wide range of PE and PP products used in anti-corrosion coating, mechanical protection and thermal insulation coating applications for oil, gas and water transportation pipelines.

Key applications:

- Three-layer steel pipe coating made from polyethylene
- Multilayer pipeline coating products made from polypropylene
- Flame spray coatings and thermal insulation coatings for off-shore, deep water pipeline projects

Our polyolefins offer excellent physical properties to protect pipelines from impact and corrosion.

ADVANCING MODERN LIVING THROUGH HEATING AND PLUMBING

Over the past four decades, polyolefin products have been steadily replacing traditional materials in heating and plumbing, such as copper in hot and cold water pipe applications.

Key applications:

- Surface heating and cooling (floors, walls and ceilings)
- Hot and cold water supply
- Radiator connections
- District heating
- Anti-freeze systems

Today, we offer a wide range of PE-X, PE-RT, PP-R, PP-RCT and PB-1 products that offer excellent properties, including superior chemical resistance, pressure resistance at elevated temperatures, weldability and flexibility.



SUPPORTING THE WATER CYCLE

Rapid urbanization and accelerating industrialization are causing increased water pollution and corresponding environmental threats. Durability and drinking water compliance of polyolefinic systems leads to continuous replacement of traditional materials like steel, ductile iron or concrete.

Key applications:

- Corrugated and solid wall sewage pipes
- Infiltration systems
- Injection-molded rainwater regulating devices

Modern wastewater systems made from polyolefins can provide benefits, including ease of installation, higher stiffness and high crack resistance.

ADVANCING THE DURABILITY OF INDUSTRIAL APPLICATIONS

Besides the classic water and gas transport applications, polyolefins provide a variety of properties that led to their use in a wide range of industries, e.g. in the production of chemicals or in the mining industry.

Key applications:

- Heating and cooling systems
- Storage and transportation of liquid chemicals
- Transport of mining solids and slurries
- Sheets for semi-finished articles for machining of apparatuses

Whether you are looking for high stiffness and good chemical resistance or excellent abrasion resistance and toughness, LyondellBasell offers resins to meet the demands of the industry for apparatus engineering.

CONDUIT PIPES

Safety is always at the top of the list when it comes to installation of wires and cables near hazardous or damp areas. LyondellBasell materials are used by customers in conduit applications for long-lasting protection that will hold up to nature's extreme forces in critical below ground power and communication infrastructure.

Key applications:

- Fiber optic cable
- Electrical cable
- Telecommunications cable
- Solar panel cables
- Windmill power cables

LyondellBasell resins offer a good balance of stiffness, toughness and ease of processing to ensure the reliable, long-term delivery of electricity and telecommunications.



ABOUT US

LyondellBasell (NYSE: LYB) is one of the largest plastics, chemicals and refining companies in the world. Driven by its employees around the globe, LyondellBasell produces materials and products that are key to advancing solutions to modern challenges like enhancing food safety through lightweight and flexible packaging, protecting the purity of water supplies through stronger and more versatile pipes, improving the safety, comfort and fuel efficiency of many of the cars and trucks on the road, and ensuring the safe and effective functionality in electronics and appliances. LyondellBasell sells products into more than 100 countries and is the world's largest producer of polypropylene compounds and the largest licensor of polyolefin technologies. In 2018, LyondellBasell was named to Fortune magazine's list of the "World's Most Admired Companies."

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Advancing Possible