A to Z

How our products find their way into your life

tell me more

You use our products every day. You just don’t realize it. That’s because our products go into the products you use, not directly onto the shelves at your supermarket or in the mall near your home. To make our point, we’ve put together examples for every letter in the alphabet. These show how some well-known products, including many of the consumer products you buy, use our products to make them better or even make them possible. So, without you even knowing it, our products touch your life.

A

Antifreeze

Oxygen was our very first product and still has hundreds of important uses today, including the production of ethylene glycol, a component of antifreeze, coolants and deicers for your car.

Apples

Nitrogen has applications in many industries and thousands of products, including many foods. One is for the storage of apples. Nitrogen from our membrane systems slows down spoilage, keeping apples crispy and juicy longer.

Automobiles

Air Products contributes to dozens of products used in automobiles. Our oxygen, argon and nitrogen are vital to making steel and aluminum for the bodies; our helium is used to inflate airbags in a crash; and our gases are used in metals processing to treat many of the parts used in the engine and other areas of the car that enable you to drive safely.

B

Balloons

What's a party without balloons? Our helium and helium packaging products inflate balloons to help make your celebration more festive. In the U.K., we get this product to the event with our Balloonium® helium cylinders.

Beer

Nothing is more dispiriting to beer aficionados than a flat brew. Not to worry. Our dedicated folks have developed carbon dioxide and nitrogen systems for breweries and taverns. They have also devised little bean-sized objects that go into beer cans to preserve the all important fizz in beer.

C

Chicken

From chicken wings to chicken curry, poultry has become a mainstay of global cuisine. Our Freshline® liquid nitrogen or carbon dioxide freezing and chilling systems are used in many poultry processing applications, including reducing bacteria in raw meat and individually freezing chicken nuggets so you can easily pull out of the bag the exact portion you want to make for dinner.

Cinnamon (ground)

Our PolarFit® solutions use the cooling power of liquid nitrogen to remove heat produced during the grinding process of cinnamon and other spices. This temperature control not only enables the production of ultra-fine spice particles, but also helps preserve aroma and flavor.

Cleaner Air

We provide technologies that enable the capture, purification and reuse of carbon dioxide (CO_2) and volatile organic compounds (VOCs). Building new plants with this technology or retrofitting the large installed base of existing coal-fired assets could significantly reduce CO_2 and VOC emissions, resulting in cleaner air.

D

Desserts

Our Freshline® food grade gases help to extend the shelf life of dessert products, improving quality and minimizing waste. In addition, using nitrogen to cool certain food surfaces can add speed and ease to layering steps and prevent the mixing of two different food items.

E

Energy

Energy is a significant end market for our products and technologies. We continue to develop clean energy solutions, including hydrogen as a fuel for transportation; LNG (liquefied natural gas) technology for natural gas as an alternative fuel; bioenergy processes; and gases and materials for alternative power, among others. Meanwhile, through gasification, we supply synthesis gas (syngas) that can be turned into energy sources.

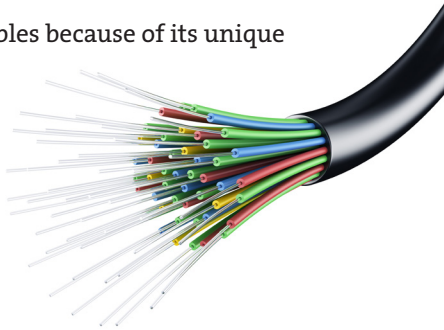
F

Fertilizer

One way fertilizer can be produced is by way of a process where hydrogen and nitrogen–two of our products—are used to make ammonia, an essential ingredient for agriculture.

Fiber Optics

Our helium gas is used in cooling of fiber-optic cables because of its unique heat and thermal conductivity properties.



G

Gasoline

The fuel that uses the largest volume of our products is gasoline. Refiners use huge quantities of our hydrogen to reduce sulfur and other contaminants for cleaner-burning transportation fuels.

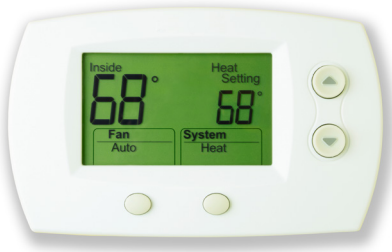
Glass

Our oxygen helps melt glass in a way that saves energy, reduces emissions, and improves quality. Our nitrogen and hydrogen are used in the forming process to make flat glass for windows, furniture and cars. And our inert gases improve the insulating properties of windows.

H

Hard Drives

Helium is less dense than air and when used in computer hard drives, it creates less drag and turbulence, which improves speed and storage while using less power.



Heat

The heat produced from processing syngas—a mixture of carbon monoxide and hydrogen, which are two of our products—can be used to make electricity using a gas turbine or steam generator. Using syngas to produce heat or power is much cleaner than direct combustion of coal.

Hyperbaric Healing

It takes more than iodine and bandages to treat a wound these days. Sometimes it takes our medical oxygen, which is used in hyperbaric oxygen therapy (HBOT) for healing wounds and fighting infections.

I

Ice Cream

Our Freshline® liquid nitrogen freezing systems help ice cream companies freeze all sorts of refreshing treats, like ice cream sandwiches. These systems also provide ease in shaping and forming novelty frozen treats.

Insulation

We play a role in keeping your homes and businesses more energy efficient by supplying fiberglass insulation manufacturers with our oxygen and burner technology, which helps them melt raw materials more efficiently and reduce their emissions.

Internet

High-speed internet uses fiber optic cables. In the manufacturing of these cables, our helium is used during the cooling process.

J

Jet Engines

Critical engines and landing gear parts are subject to various thermal spray processes that use oxygen, hydrogen, argon or helium to apply powder metal coatings. These coatings help protect the parts from thermal wear or corrosion, thus improving performance and reliability. In addition, our patented liquid nitrogen cooling technology is used to improve the efficiency of the spraying process.

K

Kale

Whether you're juicing, baking, or incorporating your kale into a main dish or salad, you want it to be fresh. Some vegetables, like kale, begin to show signs of deterioration long before most other foods. When properly cleaned, chilled and placed in suitable packaging, the shelf life of some fresh produce can be significantly extended with our MAP (modified atmosphere packaging) gases.

L

Light Bulbs

Our products play many roles in the production of all types of lighting. Our oxygen and burner technology are used in melting the glass, and nitrogen is used to cool and seal the bulbs. In addition, argon and nitrogen help electrical energy pass through the filament in an incandescent bulb, while argon and krypton are commonly used in a fluorescent bulb. Argon also helps conduct the current in mercury vapor lamps that illuminate many of our streets at night.

M

Medicine

High purity gases like our nitrogen meet the industry standards needed for pharmaceutical companies to safely manufacture critical medications.

MRI

Liquid helium is the coldest substance on earth (-452°F) and is used to keep the electrical coils in MRIs (magnetic resonance imaging) cold, enabling the powerful images of your body that help doctors diagnose and treat diseases and injuries.

N

Natural Gas

Our technology and giant heat exchangers have been used to produce most of the liquefied natural gas (LNG) made in the world over the past five decades.

Nutraceuticals

Freezing, packaging and grinding with nitrogen or carbon dioxide can help provide the highest quality nutraceutical products for consumers focused on healthy living and wellness.

O

O-rings

They have to be smooth and trim to fit right and do their job. And they get that way when those little leftover pieces, known as flashing, are removed with our liquid nitrogen deflashing systems.

Oranges

We help to improve the preservation of oranges and other fresh fruit with our MAP (modified atmosphere packaging) gases, a very effective way to inhibit spoilage.

P

Paints

Blanketing paints and coatings with dry nitrogen helps keep out oxygen and contaminants so they are always ready to roll.

Paper

This industry uses our products throughout. We make the oxygen for pulp bleaching, black liquor oxidation, lime kiln enrichment, and wastewater treatment.

Q

Quartz Glass

This very pure glass is most often made with silica, fused with the help of our hydrogen and oxygen. Due to its superior optical and thermal properties, quartz glass finds use in semiconductor fabrication and laboratory equipment.

Quiche

Just another one of many food processing applications for our liquid nitrogen or carbon dioxide quick-freezing technology.

R

Respiration

We offer a family of products and services that hospitals use to treat people afflicted with pulmonary diseases. These products include oxygen mixtures and inhalable medication.

Rockets

Although the space shuttle program has ended, we continue to supply gases like hydrogen and helium for the next generation of space exploration. Our impact is literally out of this world!

S

Smart Devices

Our gases and technologies are used in the testing, assembly and packaging of semiconductors that go into next generation consumer devices such as tablets, computers and cell phones.

Steel

Steel was our first market and is still important. Steelmakers use our oxygen in their furnaces to produce better steel, faster. They also use our argon to make stainless steel. And heat treaters use our hydrogen and nitrogen to give steel the right strength and other properties.

T

Tires

Our high-purity, high-pressure nitrogen is used in the process to help cure the rubber when tires are manufactured. In addition, our Polarfit® solutions help recycle old tires using liquid nitrogen to embrittle the rubber prior to grinding into a superfine powder for reuse.

Tools

Our gases and technologies are used to produce metal tools, making them more durable and corrosion resistant.

U

Underwater Exploration

A mix of helium and oxygen is used by deep-water divers to minimize the risk of narcosis, enabling them to dive deeper and stay down longer.

V

Vaccines

Our liquid nitrogen is used in the process to freeze-dry high-value sensitive materials used in the manufacture of vaccines and other biologics that keep our society safe and healthy.

Vegetable Oil

Our hydrogen gas is used in the hydrogenation process to change a liquid vegetable oil into a hard spread/margarine. This process stabilizes the oil and prevents spoilage caused by oxidation.

Ventilators

To assist hospital patients with breathing, we make medical oxygen used in ventilators.

W

Water

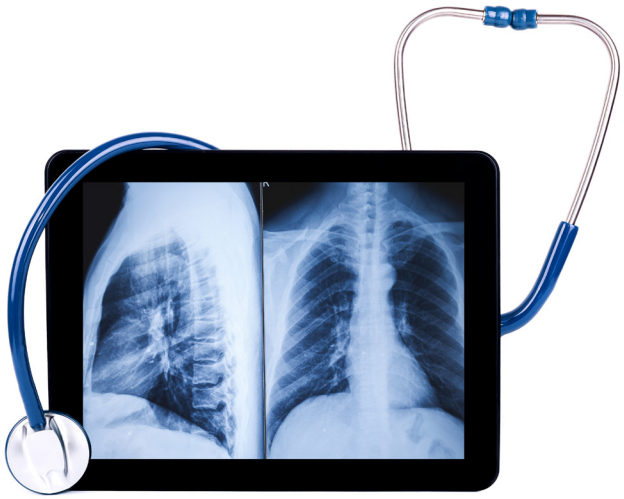
Our Halia® Water Solutions provide treatment which improves the quality of wastewater and drinking water for both industrial and municipal customers.

Welding

Our gases—argon, oxygen and carbon dioxide, among others—and Integra® cylinders are essential tools for state-of-the-art welding.

Wine

Nitrogen is helpful for both the fermentation and the packaging of wine. Cin cin!



X

X-rays

We make the specialty gas Xenon to enhance imaging in X-rays and CAT scans. It is also effective as a neuroprotectant and is used in anesthesia for many types of surgeries.

Xerography

The lasers used in xerographic scanning and printing use our helium and nitrogen.

Y

Yams

Whether you fry or bake them, we help improve preservation and inhibit spoilage of yams with our MAP (modified atmosphere packaging) gases.

Z

Zinc

One of the biggest uses of zinc is in making protective coatings for steel. We make nitrogen gas to provide an oxygen-free atmosphere for zinc smelting, and liquid nitrogen to help deflash zinc die castings.

Ziti

To get this special shape of pasta frozen and coated with sauce, our ever-helpful liquid nitrogen tumbler freezer comes in handy.

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