

Common Applications



Beer & Wine Manufacturing & Storage

Breweries and wineries take great care to prevent oxidation during all processing steps and packaging to enhance product quality. Nitrogen can also provide an inert atmosphere during the mashing and lautering operations. Increasing the nitrogen levels in the finished product to enhance foam characteristics is also common



Chemical Processing

Nitrogen is used to create an oxygen-deficient environment for use with oxygen-sensitive chemicals reducing safety hazards. It is used to propel liquids through pipelines; and in the manufacture of ammonia.

Electronics

Nitrogen prevents oxidation while manufacturing semiconductors and printed circuit processes such as wave soldering. It is also used to enhance solvent recovery systems by eliminating the use of chlorofluorocarbons for cleanup.

Food Processing & Packaging

Nitrogen extends shelf-life in packaged foods by preventing spoilage due to oxidation, mold growth, moisture migration and insect infestation.



Injection Molding

In the gas injection molding process (GIM), nitrogen is injected under high pressure into the melted polymer and displaces the core of the molded part. This creates a void and reduces the amount of material used.

Metal Production

Nitrogen is used to protect metals such as steel, copper and aluminum during annealing, carburizing and sintering operations.

Metal Fabrication

Nitrogen is utilized as a purge gas with stainless steel tube welding. It is also used to support plasma and laser cutting systems. By using high purity (99.9% to 99.99%) nitrogen, it is possible to eliminate oxide edges and the need for additional handling labor.



Petroleum Refining

Nitrogen is used to maintain pressure in oil and gas reservoirs; to blanket storage tanks and product loading/unloading; to purge pipelines; and to strip volatile organic compounds (VOCs) from waste streams. Controlling VOC emissions helps refiners comply with U.S. Clean Air Act requirements.

Pharmaceuticals

Nitrogen is commonly used for blanketing and purging to protect volatile chemicals from oxygen and high purity gases, which are a required component of many analytical instruments.

Rubber Manufacturing

In the vulcanizing process, nitrogen is used to prevent surface deteriorations due to oxidation.

