



LIN droplets deliver benefits to beverage bottlers

The migration away from glass to PET bottles for non-carbonated products such as sports drinks, juices and bottled water has been dramatic over the past decade. The use of PET has been partially enabled by liquid nitrogen (LIN) technology, which imparts both functional and sensory benefits to the container – and helps bottlers to lower their material and distribution costs.

Small drop, big effect

With the advent and refinement of LIN dispenser technology, bottlers can add a metered drop of liquid nitrogen to a bottle before it is capped. Once the bottle is capped, the small amount of nitrogen rapidly boils into a gas. This creates positive internal pressure within the closed container. With properly calibrated dispenser equipment, the amount of LIN dispensed can be custom-sized to the container, line speed and hours of operation.

For more information

For more information on LIN droplet dispensing, or any of our Freshline offerings, call Air Products today to speak with a food industry expert, or visit us at the website below.

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Improved stackability, lower packaging costs

Because PET is lighter in weight than glass, the industry move to this material has resulted in significant cost savings related to transportation and distribution.

But one of the major shortcomings of PET is that it can be somewhat flimsy and prone to collapse. To counter this, nitrogen can be used to increase the internal pressure in a closed PET bottle, adding stiffness to the container.

Bottle rigidity provided by LIN droplets can help reduce costs by allowing processors to use lighter gauge, less expensive polymer materials. In addition, the bottle stiffness allows PET bottles to be stacked on top of each other without the worry of bottle collapse. This stackability contributes to cost savings during storage, transportation and retail display.

The taste (and sound) of freshness

In addition to the practical benefits of LIN droplets, the pressure they create also delivers product marketing benefits. LIN droplets generate inert headspace in the PET container, which helps preserve quality and prevents product degradation. The “pfft” sound of air being released upon opening the bottle conveys a visceral sense of quality and freshness to the consumer. And stiffer bottles provide improved tactile experience when grabbing one off a shelf or out of a vending machine.

Rely on Air Products’ LIN knowledge

For decades, Air Products has been a trusted supplier of LIN to the food preservation and packaging markets. You depend on us to bring you a fully engineered solution including:

- Specialized equipment (including aseptic models)
- Gas supply
- Installation
- Service
- Preventative Maintenance

Ask Air Products ... and expect more

Whether your packaging, cooling, chilling or freezing applications include bakery goods, fruit and vegetables, poultry, meats, ready meals, beverages or anything in between, Air Products Freshline® solutions offer you the high-purity gases and equipment, the international supply capability, and – most important – the unmatched industry experience and technical support to help you succeed, just about anywhere in the world. We can help you improve your productivity, lower your costs, maximize your returns, and as a result, help make you more competitive in a very competitive market.

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