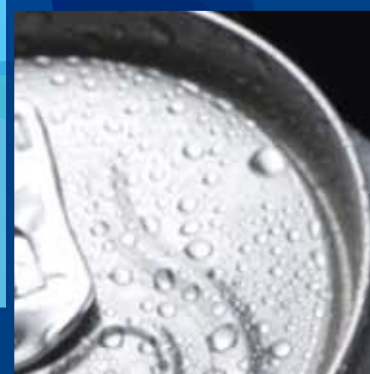


Gulf Cryo is a leading manufacturer of food-grade, industrial, medical and speciality gases in the Middle East. Covering all of the GCC, Jordan, Syria, Pakistan and Iraq, our highly skilled engineers work with the food and beverage industry developing technology to advance manufacturing processes through innovative gas applications.

N₂



Liquid Nitrogen Dosing



- **Liquid Nitrogen Dosing**
- Modified Atmosphere Packaging (MAP)
- Cryogenic food freezing and chilling
- Cold transportation
- Cleaning with dry ice blasting
- Concrete cooling

With six core gas applications providing a vast range of manufacturing and process improvements to industries such as oil and gas, aerospace, construction, food and beverage and pharmaceutical. We provide analysis, design, trials, and installation, supporting you from application inception to completion.

Our techniques can improve quality, rate of production, time, cost efficiency and distribution capabilities.



progressive by nature

Cut high cost product loss by increasing the strength of your non-carbonated bottles and cans.

Did you know?

Liquid Nitrogen expands to its gas form when released into the atmosphere increasing its volume by 700 times!

Liquid Nitrogen is inert so it protects liquid against oxidation!



The industry challenge

With ongoing environmental and cost concerns regarding the use of plastics in packaging, bottle manufacturers for non-carbonated liquids such as water, juices, vinegar and vegetable oils, have been required to reduce the thickness of the polyethylene terephthalate (PET) used to produce the bottles.

This weakens the impact resistance and tensile strength of the bottle and can result in bottles at the bottom of a stack being crushed in transportation. This is unsafe and results in high-cost product losses.

The Gulf Cryo solution

The application of a small amount of Liquid Nitrogen into the head space of the bottle or can between the filling and capping points, pressurises the bottle/can from within and prevents it from buckling under the weight caused by stacking, as well as providing a protective inert atmosphere for the product

Gulf Cryo is one of the few gas producers in the region able to offer this technology.

What we do:

- Product supply through diverse supply modes
- Feasibility studies & cost/benefit analysis
- Design, engineering and installation of the application
- Dose consulting
- Equipment supply



Image courtesy of VBS



The benefit to you

This technique offers you a host of advantages – it improves distribution, increases product shelf life, maintains product quality and it is environmentally friendly!

- Allows for a reduction in PET thickness.
- Preserves flavour and nutrient properties.
- Prevents oxidation by displacing Oxygen from the bottle headspace.
- Enables double stacking of pallets.
- Bottle design can be enhanced.
- Enables reliable vending machine delivery of non-carbonates.
- Improves labelling and multi-packing operations as bottles stay hard.

Talk to our applications engineers to identify the right solution for you.



Email us: applications@gulfcryo.com or call us: +971 8848199 Ext: 322
Visit us: www.gulfcryo.com