



LIQUID NITROGEN DOSING

CHALLENGE

- Reduce package weight
- Pressurize for stability

SOLUTION

Bottled water has been rapidly growing in popularity and is now more popular than carbonated soft drinks. While efforts to reduce the amount of plastic used in each bottle have resulted in more environmentally friendly packaging, these lightweight bottles are less stable. Dosing the headspace of the filled bottles with liquid nitrogen pressurizes the container and adds rigidity, which helps during packaging and handling.

HOW LIQUID NITROGEN DOSING WORKS

- A small, precise droplet of Liquid Nitrogen is dispensed into a bottle
- The LN₂ vaporizes, expanding to fill the headspace
- Capping the bottle before the vapor escapes traps the Nitrogen gas
- The trapped volume of gas pressurizes the bottle

ADVANTAGES OF USING LIQUID NITROGEN

- Nitrogen is inert—will not react with product
- Versatile—can be used in many different packaging applications
- 78% of atmosphere is Nitrogen—readily available and safe