



LIQUID NITROGEN DOSING

CHALLENGE

- Pressurize for rigidity
- Oxygen reduction

SOLUTION

Flexible pouches have quickly become one of the fastest-growing packaging segments. Lighter weight packaging helps to reduce environmental impacts by creating less waste, but it also requires a method to prevent the pack from collapsing during handling and transit. Dosing the headspace of the filled pouches with LN₂ adds rigidity to the pack, and helps to reduce residual oxygen in the container.

HOW LIQUID NITROGEN DOSING WORKS

- A small, precise droplet of LN₂ is dispensed into a flexible package
- The LN₂ vaporizes, expanding to fill the empty space inside the package
- Sealing the pack before the vapor escapes traps nitrogen gas
- The trapped volume of gas/liquid expands to pressurize the pouch
- To inert, the vapor must be allowed to expand and push out O₂ before the pouch is sealed.

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