



# Packaging Vents

FOR INDUSTRIAL CHEMICALS AND CLEANERS

Reliable vented  
container solutions



## Why Are Your Dangerous Goods Spilling and Becoming a Liability?

### Because all liquids are not the same

Even if you use a qualified container with a venting membrane to equalize pressure, why can the container still leak?

Passing the pressure test with water (WEP test) to meet regulatory packaging requirements does not ensure that the membrane can prevent your chemical formulation from leaking or spilling when exposed to real-world conditions.

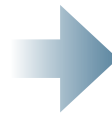
### Typical Process:



Qualified container



Load container with  
formulation for delivery



Container leaks or  
spills during delivery



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Every liquid formulation has a unique chemical make-up that results in significant variations in surface tension and viscosity. These physical properties translate to unique liquid entry pressures, most of which are very different from those of water. For example, most chemical formulations have a surface tension that is much lower than water.

Fluid	Surface Tension (dyn/cm)
Water	73
Ethanol	22
Glycerol	64
Hydrogen Peroxide (80%)	78
Mineral Spirits	25

As a result, the chemicals inside your qualified container can leak or spill because the pressure of the liquid is higher than the resistance of the venting membrane that you selected. Now what?

## How do I represent real-world conditions during testing?

Choosing a venting membrane from data sheets or relying on the WEP test alone does not guarantee reliable performance. You need to understand how the container's venting membrane performs with your formulation, or it could leak or spill when exposed to real-world conditions!

*At W. L. Gore & Associates, we go beyond the WEP test to understand the physical properties of your formulation. We use the LEP (Liquid Entry Pressure) test to identify the amount of pressure required to force various liquid formulations through the membranes used in our GORE® Packaging Vents.*

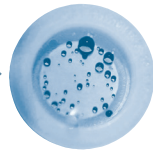
## Bottom Line

Using the LEP test is the most reliable way to ensure you select the right venting membrane and prevent your container from leaking or spilling in real-world conditions – and this requires understanding your formulation!

### Gore's Recommended Process:



Chemical Formulation



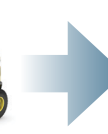
LEP Tested



Standard container with correct vent



Load container with formulation for delivery



Less risk of leaks or spills during delivery

**Maintain your container's integrity, protect your brand, and reduce your costs — choose GORE® Packaging Vents for your container!**



## OUR ASSOCIATES SPEAK YOUR LANGUAGE

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