



Packaging Vents

MOLDED COMPONENTS

Create Packaging that Breathes without Leaking

Liquids, powders and granular products such as bleach and peroxide can release or consume gases, causing plastic containers to swell or collapse, and possibly burst. These changes can be caused or accelerated by fluctuations in temperature and atmospheric pressure during storage and shipping. Packaging engineers must address these design issues to maintain package integrity throughout distribution, transportation and storage.

MAINTAIN CONTAINER INTEGRITY

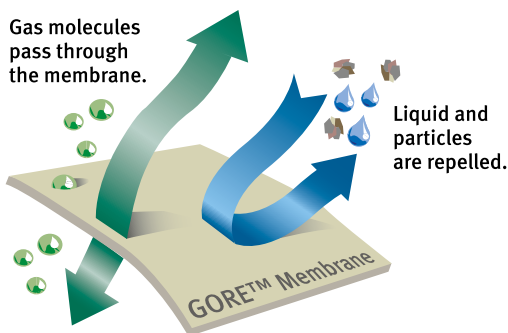
Molded components are the breathable and leak-proof solution for household and industrial chemicals. They are the only snap-in-place container venting product for liquid chemicals that offer:

- consistently high airflow
- excellent liquid resistance
- easy installation

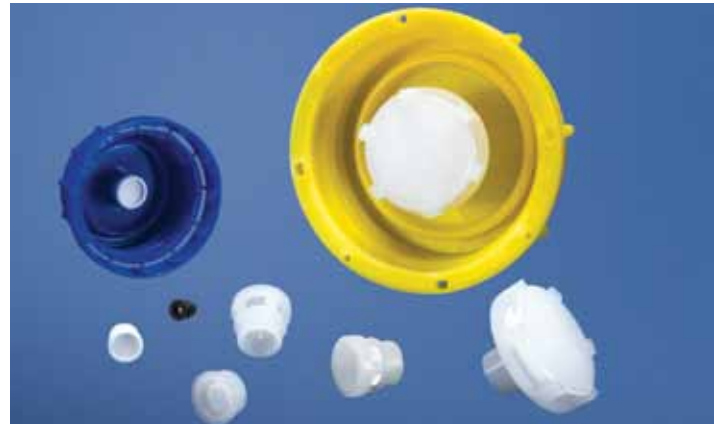
Molded components are designed for consumer cleaner caps as well as industrial drum, jerry can and IBC closures. They are molded plastic modules that house a super-resistant GORE™ Membrane. They are available in various sizes, fitting a volume range from 0.2 to 1,500 liters. Containers using molded components have consistently demonstrated compliance with UN, DOT and ADR test standards for dangerous goods applications.*

THE SCIENCE BEHIND THE SOLUTION

GORE® Packaging Vents offer an ideal combination of liquid resistance and airflow through the use of expanded polytetrafluoroethylene (ePTFE). They prevent liquid penetration, while allowing airflow and equalizing pressure, even after contact with high viscous or low surface-tension liquids. When splashed by a viscous liquid, the membrane quickly recovers its venting capability.



GORE® PACKAGING VENTS BREATHE WHILE REPELLING LIQUID AND PARTICLES.



REALIZE THE BENEFITS OF GORE® PACKAGING VENTS:

- **Equalize pressure** and prevent containers from bursting, collapsing or leaking
- **Prevent liquid penetration and continue to vent** even after exposure to liquids containing organics, surfactants, oils and solvent-based liquids
- **Integrate easily** through manual or automated installation with unique press-fit designs
- **Wide array of vent sizes and ready-to-use components**, which can be retrofitted into almost any cap design
- **Consistently demonstrate compliance** with UN, DOT and ADR test standards*
- **Durable constructions** to fit volumes from 0.2 to 1,500 liters

THE PREFERRED CONSTRUCTION FOR MANY SOLUTIONS

Gore venting technology meets the needs of nearly all liquid, powder and granular chemicals and cleaners. Typical applications include:

Chemicals

- Bleach
- Peroxide
- Peracetic acid

Applications

- Laundry detergents, household cleaners
- Disinfectants
- Fertilizers
- Industrial cleaners



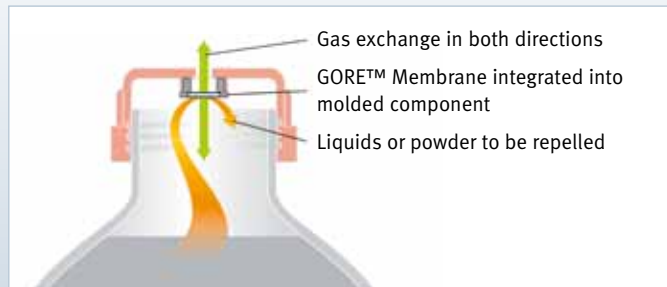
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MOLDED COMPONENTS

GORE® Packaging Vents are available in a wide array of sizes and ready-to-use components.



Part Number	D3	D10	D15	D17	D38
Part Diameter	3 mm	10 mm	15 mm	17 mm	38 mm
Water Entry Pressure (WEP)	> 0.4 bar	> 0.4 bar	> 0.5 bar	> 0.5 bar	> 0.5 bar
Typical Airflow	0.42 l/h at $\Delta p = 70$ mbar	0.22 l/h at $\Delta p = 12$ mbar	1.0 – 2.6 l/h at $\Delta p = 12$ mbar	1.2 – 3.6 l/h at $\Delta p = 12$ mbar	9.0 – 27.0 l/h at $\Delta p = 12$ mbar
Drop Test	No	No	Optimized	Optimized	Optimized
Typical Applications	Bottles 0.2 – 1 liters	Bottles 0.2 – 2 liters	Containers 2 – 30 liters	Containers 5 – 60 liters	Drum/IBC 60 – 1,500 liters



When choosing GORE® Molded Components for venting purposes of hazardous goods please consider the following regulations and agreements:

- UN Recommendations on the Transport of Dangerous Goods – Model Regulations Part 4; Chapter 4.1.1.8
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) ADR Part 4; Chapter 4.1.1.8
- US Hazardous Materials Regulations HMR; Title 49 CFR, 173.24 (g), (1), (2), (3), (4), (5)

* Only applies to GORE® D15, D17 and D38 Molded Components.



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France	33.1.5695.6565	South America	55.11.5502.7800
Germany	49.89.4612.2211	Spain	34.93.480.6900
India	91.22.6768.7000	Taiwan	886.2.8771.7799
Italy	39.045.6209.240	United Kingdom	44.1506.460123
Japan	81.3.6746.2572	USA	1.410.392.4440
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