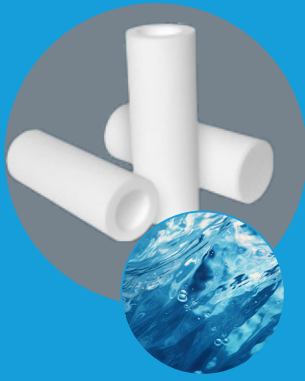


Porous Filters





Filter Elements for Liquids

Porous elements and parts for the filtration and purification of water and other liquids. Manufactured in various shapes, thicknesses, specific pore sizes (μ), and porosity (%) levels, ensuring excellent and efficient filtration and continuous flow.



Mufflers/Silencers

Widely used in the exhaust of pneumatic valves and other applications. They offer excellent sound absorption and attenuation. Manufactured with threaded bases made from engineering-grade plastic ranging from 1/8" to 1", or microporous plastic threaded bases.



Laboratories, Medical Equipment and Aesthetics

Porous plastic filter elements have extensive applications in the medical-hospital industry, chemical laboratories, and general aesthetic equipment. They ensure high chemical resistance, durability, and particle filtration efficiency.



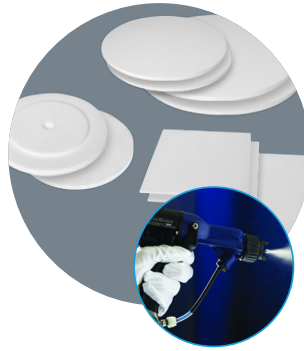
Compressed Air and Gases

Porous elements for compressed air preparation units, flow control devices, dental equipment, and more. Available in various models, specifications, and dimensions compatible with numerous brands on the market.



Bubblers/Air Diffusers

Porous tubes and parts that ensure uniform bubble formation. Recommended for use in aeration tanks for water or effluent treatment, dissolving aggressive gases (ozone), decarbonation towers, aerating food or beverages, flotation tanks, venting applications, and more.



Fluidizing Plates

Porous plates used in the fluidization of various types of paint resin and powders, forming stable and uniform beds necessary for electrostatic painting processes.

They are also used to create stable and homogeneous fluidized beds for pneumatic transport of bulk products and mixing powdered substances. Customized sizes, porosities, and thicknesses are available according to customer needs.

Porous plates find significant applications in industries such as electrostatic painting equipment, food processing, chemicals, plastics and detergents, construction materials (cement), ceramics, and more.



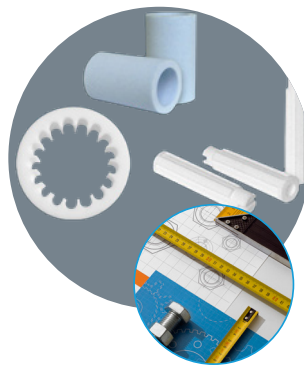
Measurement and Control Equipment

Porous filter elements for gas analyzers (combustion and others), sensor protection, and more. Manufactured according to client technical specifications.



Chainsaws and High-Pressure Washers

Gasoline filters for chainsaws and water filters for high-pressure washers. Manufactured with dimensions identical to those available on the market and delivering excellent filtration performance.



Custom Products – Tailored Solutions

We offer a dedicated technical team and specialized support for developing specific and innovative porous plastic solutions to meet client needs.

Whether through modifications to existing products or exclusive developments, we are equipped to support and deliver customized microfiltration solutions.



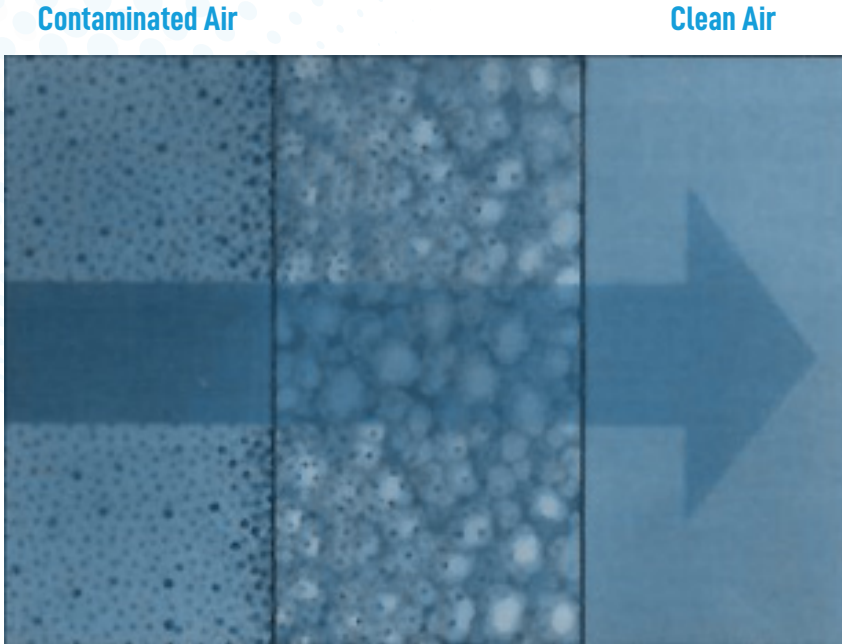
Discs and Breathers

Porous plastic is ideal for breathers used to balance internal and external pressure in containers, drum lids, batteries, fuel tanks, and more.

The excellent chemical resistance of porous plastic ensures that the contained liquid will not compromise the breather's lifespan.

Filtration Process

Utilizing the entire volume of the porous element, the filters can retain many particles.



GVS Filter Element

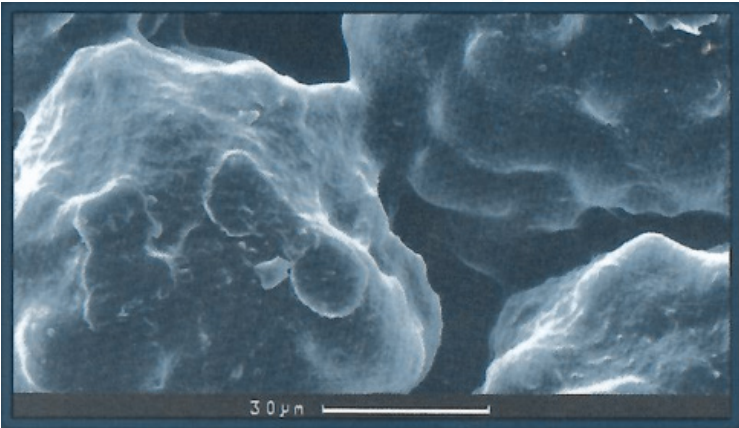
GVS Brazil uses porous plastic to provide safe, innovative, and personalized solutions for clients. Through the sintering process, porous plastic yields uniform surfaces with exceptional mechanical and chemical properties. Its granules define characteristics such as porosity, average pore size, and retention capacity.

Average pore sizes range from 1 μm to 100 μm , with special configurations available upon request.

Clear view of porous plastic granules



Detail "E"



Benefits of Filter Elements

Filters and similar elements are used across various sectors to clean, separate, or fluidize liquids, solids, and gases.

In industries, these elements commonly filter liquids such as water, oil, fuel, and chemicals, purify air, or separate external contaminants like dust, asbestos, silica, and heavy metals. Another application is fluidizing loose solids (powders, etc.) that tend to settle during transport or storage.

The development of microporous plastic resin from ultra-high-molecular-weight polyethylene brings to filtration technology a material with unique properties, solving various challenges.

Advantages

- Excellent chemical resistance to acids, alkalis, bases, and aggressive vapors.
- Self-lubricating properties for low friction.
- Lightweight.
- High impact resistance.
- Low water absorption.
- Non-toxic, making PE-UHMW suitable for food production lines.
- High abrasion resistance, ensuring long service life.
- Operating temperatures range from -269°C to $+90^{\circ}\text{C}$, depending on the specific case.
- Available in filtration grades 6 and 8.
- Polyethylene is more resistant than polypropylene, maintaining integrity at higher temperatures.
- Flexibility in shapes beyond cylindrical cartridges.
- Wide range of particle retention capabilities, with pore sizes from $1\ \mu\text{m}$ to $100\ \mu\text{m}$.

Filter Element Applications

- Pneumatic automation equipment.
- Electrostatic painting and fluidized bed systems.
- Compressed air equipment.
- Aquaculture and pisciculture equipment.
- Ozone injection equipment.
- Agricultural equipment.
- Pneumatic powder transport systems.
- Aesthetic, physiotherapy, medical, and dermatological devices.
- Laboratory and hospital instruments.
- Vacuum systems and air compressors.
- Manufacturers of plastic packaging with valved lids.
- Gas analysis, automation, and measurement instruments.
- Water, liquid, and gas purifiers.
- Environmental systems and equipment.
- Digital printing devices.
- Pharmaceutical industry.
- Chemical industry.
- Automotive industry.
- Petrochemical industry.
- General filter manufacturers.

GVS do Brasil Ltda.

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