



Products Made of Porous PTFE (Polytetrafluoroethylene)

We have exploited the unique properties of PTFE (Dyneon TF™, Teflon®, etc.) to create a range of practical application options in the area of porous materials.

During our research, the following extraordinary properties were particularly apparent:

- Employable at temperatures from -200°C to +260°C;
- Universal chemical resistance;
- Anti-adhesive behavior;
- No physiological concerns;
- Avoids water absorption;
- Pronounced hydrophobic behavior.

With the development of special granulates and the application of our numerous manufacturing techniques, we have been able to isolate additional characteristics:

- Graduated pore sizes;
- Differentiated pore volumes;
- Structured air permeability values
- Defined water retention behavior.

In addition, we are able to create seamlessly molded combinations of porous PTFE and solid PTFE. This opens the way for mechanically stable composite options (e.g., by means of threaded connections).

■ Our product range includes

- Semi-finished goods made of PTFE in a wide variety of shapes and sizes
 - Sheetting and membranes in widths up to 300 mm, thicknesses between 0.2 and 5 mm, and lengths from 0.5 to 150 m.



- Panels in sizes up to 600 x 300 mm, and thicknesses from 5 to 50 mm.
- Blocks in sizes up to 300 x 300 x 300 mm.
- Rods with diameters from 5 to 100 mm and lengths up to 500 mm
- Tubes with internal diameters from 5 to 400 mm, wall thicknesses from 1 to 100 mm, and lengths up to 500 mm.
- Billets in the shape of blocks, profiles, hemispheres, and other hollow bodies.
- Customer-specific finished goods that can be designed in a wide variety of shapes, e.g., diaphragms, sleeves, discs, tubing systems, rings, membranes, as well as all types of stamped components.



■ Specific characteristics

In all cases, it is the isolation of the physical properties as well as the reproducibility which are important. We have mastered the latter in stages with narrow tolerances. We are currently able to achieve the following specifications as tolerance limits:

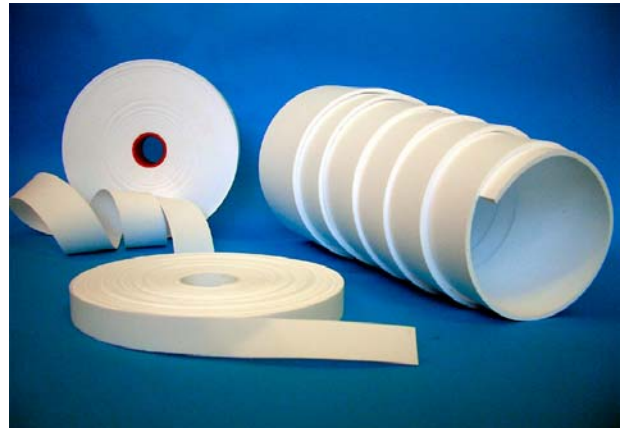
- Permeation rates for air of 1 to 1000 ml / s.cm².bar;
- Water retention properties up to 1.2 bar;
- Mean pore diameters of 1 to 100 µm;
- Pore volumes of 5 to 65 %.

■ Practical applications

- Chemical, semiconductor, and clean room technology
 - Filtration of gases and liquids
 - Catalyst carriers / diaphragm material
 - Gas inlet lines or gas diffusion (bubbling)
 - Pressure compensation of chemical containers and batteries
- Filter and safety technology
 - Filter membranes
 - Protective sleeves
 - Dust filters
 - Sensor protection elements
 - Sound dampening
- Photo-optic measurement techniques
 - Reflectors
 - Spectrometers
 - Ulbricht globes
 - Photometers
- Motor vehicle technology
Water repellent, pressure compensation elements to protect electronic control systems against pressure build-up and water penetration.

Typical application areas include:

- ABS
- Air bags
- ASR
- Power steering
- Batteries



- Injector regulation
- ESP
- Horns
- Headlights

This wide range of assembly options and characteristic properties permits comprehensive and varied applications, from the lab to heavy industry.

Because of our many years of practical experience we are able to cover even critical application areas. Simply define your requirements and we will be pleased to recommend solutions and provide you with free samples for your suitability tests.