



GORE® Filtration Products

High Durability Filter Bag

Anti-Static Polytetrafluoroethylene Felt
847 g/m² (25 oz/yd²)

Description

A 260°C (500°F) maximum service temperature, 100% expanded polytetrafluoroethylene-coated felt filter bag that incorporates a conductive staple to offer static dissipation in pulse jet style dust collectors with chemically aggressive operating conditions.

Features & Benefits

- Chemically inert providing the highest all-around chemical resistance and maximum bag life.
- Constructed using a woven RASTEX® scrim that provides excellent dimensional stability, extended flex life, and resistance to mechanical damage over the life of the filter.

- Patented GORE™ High Durability membrane technology provides an excellent combination of filtration efficiency, airflow, and durability.

Applications

- Chemicals Processing: Silica production, pharmaceutical and chemical process reactors that incorporate micronizing, grinding, and product collection in extreme environments that are chemically and thermally aggressive.
- Minerals Processing: N/A.
- Metals Processing: Lead, copper, and other base metal production.
- Power Generation and Incineration: N/A

Laminate Technical Data

Weight:	847 g/m ² (25 oz/yd ²)
Fiber Content:	Staple 1 – GORE® Expanded Polytetrafluoroethylene Staple 2 – Carbon-Filled Expanded Polytetrafluoroethylene Fibers Scrim – Woven Expanded Polytetrafluoroethylene
Felt Construction:	Supported Needlefelt
Continuous Operating Temperature:	260°C (500°F)
Maximum Surge Temperature:	274°C (525°F)
Acid Resistance:	Excellent
Alkali Resistance:	Excellent
Breaking Strength	
• Machine Direction:	890 N/5 cm (200 lb/2 in) wide sample
• Cross-Machine Direction:	668 N/5 cm (150 lb/2 in) wide sample
Mullen Burst:	3447 kPa (500 psi)
Thickness:	0.89 mm (0.035 in)
Thermal Stability:	< 2% shrinkage at 260°C (500°F) after 2 hours (unrestrained)
Durability:	Excellent
Static Decay Time:	0.01 seconds (NFPA 99)

All data expressed as typical values. This technical data is subject to change. Please contact W. L. Gore & Associates, Inc., directly to confirm current information.

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Test Objectives

Due particularly to triboelectric effects, static charges can build up on a filter bag surface. Unless these charges decay quickly, arcing may occur and cause a fire, explosion or personal injury. The scope of this report is to compare the static decay properties of several GORE™ membrane laminates used in our filter bags and filter cartridges.

Test Method

National Fire Protection Agency (NFPA) Code 99, Chapter 12, using Method 4046 of Federal Test Method Standard 101C. Samples were conditioned at 70°F, 40% relative humidity. This test measures the rate of static decay for textiles. A decay time of less than 0.5 seconds is required to pass the test.

Test Apparatus

The test equipment is an Electro-Tech Model 406C static decay meter. A 4" x 6" fabric sample is secured lengthwise on two

grounded clamps. A static charge of 5,000 volts is introduced on the fabric surface. The charge then drains off toward the grounded clamps. An electronic timer records the time to drain the fabric surface charge from 5,000 volts to 500 volts.

Test Conclusions

The short decay times of the above filter bag materials indicate they have a high propensity to dissipate static charge. It is recommended that GORE™ membrane anti-static laminates be utilized where static decay is crucial to the high performance operation of the baghouse. Industries which require the properties of an anti-static filter include: food, pharmaceuticals, chemicals, plastics, coal milling, conveying, and grain processing.

Test Results

Samples	5,000 – 500 Volts Decay Time (sec)
GORE™ Membrane High Durability Laminate (anti-static polyester felt)	0.01
GORE™ Membrane High Durability Laminate (anti-static polytetrafluoroethylene felt)	0.01
GORE™ Membrane Laminate (anti-static, acid-resistant aramid felt)	0.01
GORE™ Membrane Laminate (anti-static acrylic felt)	0.01

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