



GORE® Filtration Products

HIGH DURABILITY FILTER BAG

Anti-Static Polyester Felt

475 g/m² (14 oz/yd²)

DESCRIPTION

A 135°C (275°F) maximum service temperature, anti-static polyester felt filter bag for use in pulse jet style dust collectors where static dissipation is required.

FEATURES & BENEFITS

- Patented GORE™ High Durability membrane technology provides an excellent combination of filtration efficiency, airflow, and durability.
- Polyester fibers provide good all-around chemical resistance, especially in applications operated below 79°C (175°F).
- Special multifilament scrim design provides excellent dimensional stability and resistance to mechanical damage over the life of the filter.

- Carbon-filled poly-acrylonitrile copolymer fibers provide static dissipation (passes NFPA-99 Static Decay Test).

APPLICATIONS

- **Chemicals Processing:** Dryer baghouses, bin vents, and nuisance dust collectors in the catalyst, pigment, and plastic industries.
- **Minerals Processing:** Coal mill collectors.
- **Metals Processing:** Process venting and material handling dust collectors for pulverized coal.
- **Power Generation and Incineration:** Coal handling collectors and coal milling baghouses.

LAMINATE TECHNICAL DATA

Weight:	475 g/m ² (14 oz/yd ²)
Fiber Content:	Staple 1 – Polyethylene Terephthalate Staple 2 – Carbon-Filled Poly-Acrylonitrile copolymer Scrim – Polyester Multifilament
Felt Construction:	Supported Needlefelt
Continuous Operating Temperature:	135°C (275°F)
Maximum Surge Temperature:	149°C (300°F)
Acid Resistance:	Fair
Alkali Resistance:	Fair
Breaking Strength	
• Warp:	1334 N/5 cm (300 lb/2 in) wide sample
• Fill:	1557 N/5 cm (350 lb/2 in) wide sample
Mullen Burst:	4481 kPa (650 psi)
Thickness:	1.8 mm (0.071 in)
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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