GORE® Filtration Products

High Durability Filter Cartridge

Anti-Static Polyester Felt
475 g/m² (14 oz/yd²)

Description

A 135°C (275°F) maximum service temperature, stayed-polyester felt filter cartridge for use in pulse jet style dust collectors where high differential pressure and high cleaning pressures are required due to aggressive dust loading.

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).
- Carbon-filled poly-acrylonitrile copolymer fibers provide static dissipation (passes NFPA-99 Static Decay Test).
- Available in top, bottom, and horizontal loading configurations.
- Withstands pressure drop up to 6.2 kPa (25 inches water gauge).
- Special multifilament scrim design provides excellent dimensional stability and resistance to mechanical damage over the life of the filter.

Applications

- **Chemicals Processing:** Dryers, bin vents, and nuisance dust collectors in pigment, plastic, and catalyst industries.
- **Minerals Processing:** Coal mill collectors, finish mills, raw mills, bulk pneumatic conveying, and bin vent dust collectors.
- **Metals Processing:** Process venting and material handling dust collectors for pulverized coal.
- **Power Generation and Incineration:** Material handling for coal and limestone

Laminate Technical Data

Weight:	475 g/m² (14 oz/yd²)
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.

FOR INDUSTRIAL USE ONLY. Not for use in food, drug, cosmetic or medical device manufacturing, processing, or packaging operations.

W. L. Gore & Associates, Inc.
101 Lewisville Road, Elkton, MD 21922
Toll-Free: 1.800.431.GORE (4673)
Phone: 410.506.3300 • Fax: 410.398.6624

www.gore.com/filtration

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Filters

NFPA 99 – Laminate Static Decay Test Summary

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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