

# Cooling Filters

High reliability cooling for outdoor electronic cabinets

## High Reliability Cooling with Standard Filter Sizes

### Gore's Ambient Air Cooling Technology

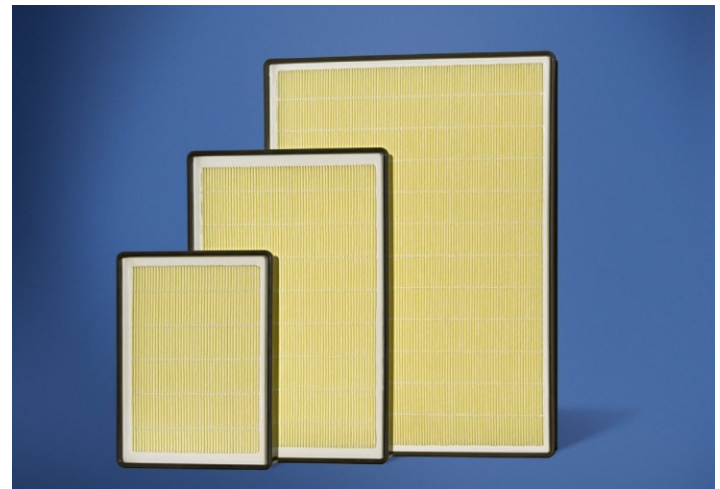
Unlike closed loop systems such as AC and HEX, GORE® Cooling Filters enable the use of direct air cooling by providing critical protection from water, corrosive salts and other airborne contaminants – allowing you to take full advantage of the natural thermal efficiency of ambient air.

### Lighter Weight and Reduced Lead Times with Standard Sized GORE® Cooling Filters

With a family of standard sized filter frames Gore complements its field-proven product offering of highly reliable and cost efficient ambient air cooling filter solutions.

Available in 4 different sizes these filters incorporate the high-performance Gore filtration media into a lightweight but strong ABS polymer frame, providing the most reliable protection possible for a variety of applications.

Cabinets fitted with GORE® Cooling Filters easily pass the most stringent requirements, including IP55, global salt fog standards and 70 mph Wind-Driven Rain. The filters' lightweight design combined with short lead times and easy integration into existing cabinets make them a cost efficient solution for state-of-the-art thermal management.



### Key Features

- Hydrophobic GORE™ Membrane
- ABS Polymer Frame
- 99 % Filtration Efficiency
- Requires No Regular Maintenance
- Protects Against Salt and Other Corrosive Particles

### Key Benefits

- Low Capital Costs
- High System Reliability
- Increased Fan Durability (vs. HEX)
- Short Lead Times
- Lighter Weight

### Typical Applications

- Telecomm Base Stations, Power Cabinets and Broadband Infrastructure
- Outdoor Electronic Control Cabinets
- Outdoor Visual Displays

\* In combination with properly mounted louvers and suitable cabinet

#### Construction Materials

Frame	ABS Black
Pleated Filter Media	Fully Synthetic Composite with ePTFE
Potting	Polyurethane
Gasket	Polyurethane Foam

#### Product Performance

Operating Temperature	-40 to + 65 °C
Humidity Range	0 to 100 % RH
Filtration Efficiency	99% (@ 0.3 µm, 1 cm/sec)
Flammability	UL 900
Typical Filter Lifetime	Up to 5 Years (based on local environment)

#### Application Performance\*

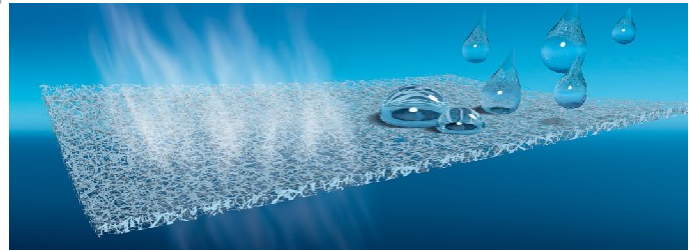
Dust/Water Protection	IP55
Corrosion Protection	IEC 60068-52 Cyclic Salt Fog, Telcordia GR 487

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## The Science Behind the Solution

### Gore's Proprietary ePTFE Membrane Technology

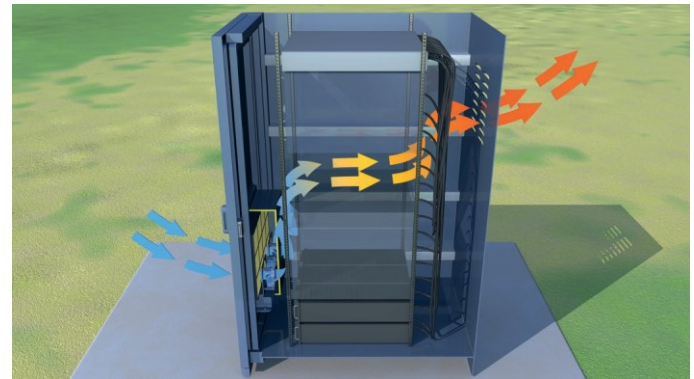
Gore's proprietary expanded polytetrafluoroethylene (ePTFE) membrane technology is used in a wide variety of applications such as high performance fabrics, medical implants and high performance filter media. This microporous membrane allows cool, clean air to flow into the cabinet while repelling water and filtering out harmful contaminants such as corrosive salts, dust and dirt. GORE™ ePTFE membranes provide a minimum of 99% particle filtration efficiency at the 0.3 μm level (1 cm/sec).



Gore's expanded PTFE membrane repels water and contaminants while allowing air to permeate through its microporous structure.

### Application Expertise and Experience

With sales and market experience of more than 15 years and several hundred thousand GORE® Cooling Filters deployed globally Gore has gathered unparalleled in-depth application knowledge. Based on global field testing under various climatic conditions we are in the position to provide our customers with realistic lifetime modelling projections that help to minimize maintenance uncertainties.



Our applications engineers will help you select the right filter for your application.

### Typical Performance Characteristics per Filter Size

GORE® Cooling Filter Part Number	Dimensions H x W x D (mm)	Maximum Peak Airflow (m³/h)/CFM*	Equivalent Heat Dissipation (W)*
CF541239	305 x 230 x 57	94/55	300
CF541238	455 x 305 x 57	188/110	600
CF541237	605 x 455 x 57	408/240	1300
CF541242	605 x 455 x 80	628/370	2000

\*Assumes ΔT = 10 °C PM10 = 50 μg/m³

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

GORE® Cooling Filter meet hazardous substance thresholds specified in EU Directive 2002/95/EC (Restriction of Hazardous Substances or "RoHS").

Gore has successfully completed the REACH pre-registration process and is aware of its obligation under Article 33 of REACH to provide recipients of our products with information in our possession regarding substances on the Candidate List present in our products at levels above 0.1%.

All technical information and advice given here is based on Gore's previous experiences and/or test results. Gore gives this information to the best of its knowledge, but assumes no legal responsibility. Customers are asked to check the suitability and usability in the specific application, since the performance of the product can only be judged when all necessary operating data are available. The above information is subject to change and is not to be used for specification purposes.

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