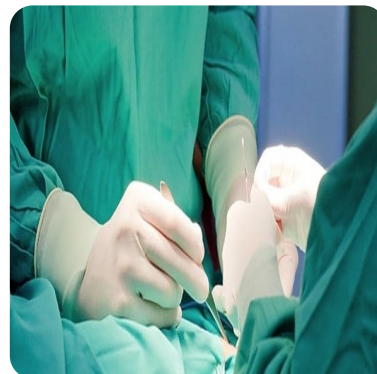




### Medical Industry Solutions

#### GREAT LAKES FILTERS: ADVANCING MEDICAL TEXTILE SOLUTIONS

Great Lakes Filters, a division of Acme Mills, specializes in technical fabrics and filtration solutions that are essential for medical systems and environments. Our filtration products are designed to maintain sterile conditions, improve air and fluid purity, and support the development of life-saving medical devices.



### Solutions for Filtration Excellence



#### HIGH-EFFICIENCY TECHNICAL NON-WOVENS

Precision-engineered filter media designed for ventilators, respiratory devices, and fluid filtration systems.



#### CUSTOM DIE CUTTING & SEWS

Filtration products that help maintain sterile conditions in hospitals, labs, and medical manufacturing facilities.



#### CUSTOM FILTRATION SOLUTIONS

Tailored filter materials and systems to meet the unique demands of medical device production, pharmaceutical manufacturing, and biotech processes.

### Why Choose Great Lakes Filters?

- ✓ **Custom Solutions:** We collaborate closely with your team to design filtration products that meet your exact specifications.
- ✓ **Proven Expertise:** Decades of experience delivering reliable solutions for medical and healthcare applications.
- ✓ **Regulatory Compliance:** Our products meet or exceed medical industry standards for hygiene, safety, and performance.
- ✓ **Innovation:** We leverage cutting-edge technology to develop advanced materials that enhance medical outcomes.
- ✓ **Sustainability:** Commitment to eco-friendly solutions that support the healthcare industry's sustainability goals.



## Applications for the Medical Industry

- ✓ **Cleanroom and Filtration Systems:** Air and fluid filters that support sterile environments.
- ✓ **Medical Device Components:** Advanced filtration solutions for critical device performance.

## Your Partner in Healthcare Innovation

Great Lakes Filters is your partner in innovation, delivering high-performance materials and solutions to meet the evolving demands of the pharmaceutical industry. Discover how our expertise can support your goals and elevate your operations.



## Case Study

### Enhancing Lab Safety with Formaldehyde Absorbent Pads for a Pharmaceutical/Life Science Supplier

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#### Needs Assessment & Solution Summary

Great Lakes Filters collaborated with a leading supplier in the Pharmaceutical/Life Science market to address a critical health and safety need within laboratory environments. The client required a reliable solution to mitigate the risks posed by formaldehyde fumes during tissue sample examinations. These fumes, emitted from tissue samples preserved in formaldehyde solutions, are highly noxious and known carcinogens, posing a significant hazard to lab technicians' health. Without an effective method to neutralize these vapors, technicians would be exposed to harmful fumes in the laboratory, jeopardizing safety and potentially violating workplace safety regulations. The client faced operational challenges in supplying biopsy kits that met global safety and compliance standards. They needed a pad that not only absorbed and neutralized formaldehyde vapors effectively, but also integrated seamlessly into their biopsy kits for distribution worldwide. Great Lakes Filters developed a specialized absorbent pad featuring a unique composite material, addressing the client's critical safety requirements. By handling the production, cutting, and packaging of these pads, Great Lakes Filters enabled the client to provide a safer, globally compliant biopsy kit to their customers while reducing operational complexities.

#### Project Specifications

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- ⚙️ **Client:** Large supplier in the Pharmaceutical/Life Science market
- ⚙️ **Industry:** Pharmaceutical/Life Science
- ⚙️ **Application:** Absorbent pads for biopsy kits to neutralize formaldehyde fumes
- ⚙️ **Region:** North America





## Specifications

- ✓ **Purpose:** Protect lab technicians from formaldehyde vapors during tissue sample observation
- ✓ **Material:** Unique composite material combining a substrate, super-absorbent neutralizing media, and vapor-locking film
- ✓ **Size and Packaging:** Custom cut and packaged for global distribution

## Uses & Applications

These absorbent pads are designed to be included in biopsy kits for medical and research laboratories. During tissue examination, technicians place samples preserved in formaldehyde solution on the pads. The pads actively absorb and neutralize harmful fumes, ensuring the lab environment remains safe and compliant with health and safety standards.

## Potential Industries



### HEALTHCARE

Hospitals and diagnostic labs handling tissue preservation or autopsy procedures.



### VETERINARY MEDICINE

Laboratories and clinics processing tissue samples from animals.



### EDUCATION AND RESEARCH

University labs and academic research facilities working with preserved specimens.



### INDUSTRIAL MANUFACTURING

Facilities handling formaldehyde or similar volatile organic compounds (VOCs) in their processes.



### CHEMICAL PROCESSING

Environments where formaldehyde or related substances are used in production or analysis.

## Capacity

Great Lakes Filters' advanced converting facility ensures the production and packaging of absorbent pads at scale, meeting the global demand of the client's biopsy kits. The facility's flexibility allows for customized sizes and packaging options to meet specific distribution requirements.





## Manufacturing Details

### MATERIAL COMPOSITION

The absorbent pads consist of a three-layer composite material:

**Substrate Layer:** Provides structural integrity and support for tissue samples.

**Neutralizing Media:** Contains a super-absorbent material chemically formulated to neutralize formaldehyde vapors.

**Vapor-Locking Film:** Seals in harmful fumes, preventing their escape into the lab environment.



### CUTTING AND CONVERTING

Pads are precision-cut to meet specific dimensional requirements.

Advanced converting equipment ensures accuracy and efficiency at scale.



### PACKAGING

Pads are packaged in sterile, pharmaceutical-grade materials to ensure compliance with industry standards. Custom packaging configurations are implemented to optimize global distribution.

## Quality Control

Great Lakes Filters adhered to stringent quality assurance protocols to meet the client's rigorous pharmaceutical standards:

- ✓ **ISO-Certified Production:** All manufacturing processes were conducted under ISO-certified conditions to ensure consistency and reliability.
- ✓ **Material Testing:** Each composite material batch underwent testing for absorbency, neutralization effectiveness, and structural integrity.
- ✓ **Product Inspection:** Final pads were inspected for dimensional accuracy and packaging integrity.



## Value Delivered

The client gained significant value from Great Lakes Filters' solution:

- ✓ **Enhanced Safety:** The absorbent pads provide a critical safety feature for lab technicians, neutralizing hazardous fumes effectively.
- ✓ **End-to-End Service:** Great Lakes Filters handled production, cutting, and packaging, reducing the client's operational burden.
- ✓ **Regulatory Compliance:** The pads met stringent pharmaceutical and ISO standards, ensuring the client's biopsy kits were globally compliant.

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## Contact Great Lakes Filters

Need assistance in maximizing manufacturing efficiencies to ensure quality and optimize costs? Call or email us today and one of our skilled team members will lead the way. (800) 521-8565 ~ [info@acmemills.com](mailto:info@acmemills.com)