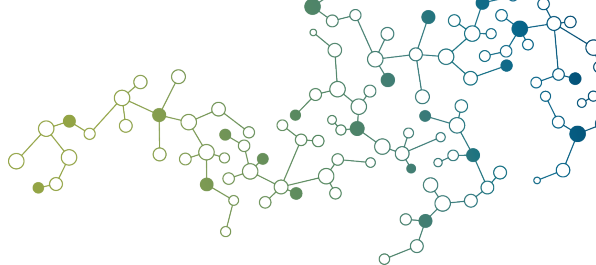


FIBERS



nZorb™ EMBEDDED HYDROPHILIC TECHNOLOGY FOR FIBER APPLICATIONS

PFAS-free hydrophilic performance engineered into the polymer. Designed to improve wetting, wicking, absorbency, and fluid transport.



www.Americhem.com

Americhem: A Global Leader in Functional Polymer Solutions

Americhem is a global leader in color and additive technologies, delivering innovative, sustainable polymer solutions for fiber and nonwoven markets. With decades of expertise in polymer science, additive engineering, and regulatory compliance, Americhem helps customers address evolving performance expectations while adapting to global sustainability initiatives.

Embedded hydrophilic performance is increasingly important in products where comfort, dryness, and fluid handling affect user experience and product performance. Americhem's nZorb™ platform meets that need through PFAS-free, embedded functionality engineered directly into the polymer, helping OEMs, product developers, and manufacturers achieve targeted wetting, wicking, absorbency, and fluid transport performance.

AMERICHEM OFFERS THE FOLLOWING BENEFITS AND MORE:

CUSTOMIZATION

Tailored additive systems designed around polymer type, processing conditions, and end-use performance targets.

REGULATORY COMPLIANCE

Support for regulatory frameworks including cGMP, FDA, DMF/LOA and USP requirements.

QUALITY & PERFORMANCE

Providing superior quality and outstanding performance, with an emphasis on durability, precision, and versatility. Reliable results are achieved through advanced polymer formulation and dispersion technologies.

EXPERTISE & INNOVATION

Leveraging years of industry experience and expertise to develop solutions.

GLOBAL REACH

Americhem delivers reliable quality and service to customers across the globe, backed by worldwide manufacturing, technical support, and collaborative customer partnerships.



From formulation through production, Americhem partners with OEMs, product developers, and manufacturers to develop nZorb™ solutions engineered for embedded hydrophilic performance, moisture management, and consistent fluid transport.



INTRODUCING NZORB™

Hydrophilic Performance for Comfort, Dryness, and Liquid Management

In hygiene, medical, wipes, filtration, and specialty nonwoven products, fluid handling directly influences comfort, dryness, and end-product performance. OEMs and product development teams increasingly expect fiber and nonwoven materials to deliver reliable comfort, liquid management, and end-product performance without creating unnecessary processing complexity. Embedded hydrophilic functionality can help address those requirements by supporting wetting, wicking, water absorption, absorbency, and fluid transport without adding complexity to the manufacturing process. nZorb™ was developed to meet that need.

nZorb™ is Americhem's hydrophilic masterbatch platform for fibers and nonwovens. Integrated directly into the polymer during in-melt incorporation, nZorb™ improves wetting, wicking, water absorption, absorbency, strike-through, rewet, and fluid transport while maintaining processing efficiency and end-product performance.

By embedding hydrophilic functionality into the fiber structure, nZorb™ supports lasting moisture management while helping manufacturers improve comfort, dryness, and liquid handling across a broad range of applications.

WHY EMBEDDED HYDROPHILIC PERFORMANCE?

- PFAS-free hydrophilic technology
- Improves wetting, wicking, water absorption, absorbency, and fluid transport
- Supports comfort, dryness, and liquid management
- Embedded hydrophilic functionality
- Designed primarily for PP fiber systems, with select additional polymer compatibility
- Designed for scalable commercial manufacturing

APPLICATIONS

BUILT FOR PRODUCTS WHERE MOISTURE MANAGEMENT MATTERS

nZorb™ delivers embedded hydrophilic performance across fiber and nonwoven applications where comfort, dryness, and liquid management directly influence product performance.



Hygiene: Deliver durable hydrophilic performance for diapers, adult incontinence, and feminine hygiene products requiring reliable wetting, absorbency, and fluid transport. nZorb™ supports comfort, dryness, and liquid management throughout product use.



Medical: Embedded hydrophilic technology for medical nonwovens where fluid intake, transport, and distribution are critical. nZorb™ supports applications including surgical masks, gowns, bedding, wound dressings, drapes, swabs, and gauze.



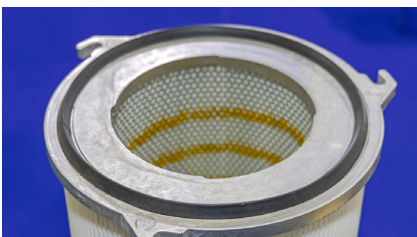
Wipes: Deliver embedded hydrophilic performance for wipes requiring rapid wetting, efficient fluid distribution, and reliable liquid management. nZorb™ improves comfort and moisture handling by supporting consistent wetting, wicking, absorbency, and fluid transport throughout product use.



Nonwovens: Designed for spunbond, meltblown, staple fiber, and bicomponent applications, nZorb™ delivers embedded hydrophilic functionality while maintaining processing efficiency and end-product performance.



Designed for PP, PET in Development: nZorb™ is designed for polypropylene-based fiber and nonwoven systems, with development underway for select polyester applications.



Filtration: Hydrophilic modification supports fluid intake and transport in specialty filtration media where wetting behavior directly influences performance.

APPLICATIONS



PERFORMANCE FROM A GLOBAL LEADER

Why Better Moisture Management Creates Better Products

Comfort, dryness, and reliable liquid management directly influence the performance of hygiene, medical, wipes, filtration, and specialty nonwoven products. By embedding hydrophilic functionality directly into the polymer, nZorb™ helps OEMs, product developers, and manufacturers improve moisture management while maintaining processing efficiency and end-product performance across demanding fiber applications.

BENEFITS

PFAS-Free, Embedded Hydrophilic Performance

PFAS-free hydrophilic functionality is integrated directly into the polymer, supporting durable wetting, wicking, absorbency, strike-through, rewet, and fluid transport throughout product use.

Designed for Comfort & Dryness

Supports faster liquid intake, efficient fluid distribution, improved comfort, and lasting dryness across hygiene, medical, wipes, filtration, and specialty nonwoven applications.

Processing-Friendly Technology

Designed to maintain dispersibility, processing efficiency, and end-product performance under standard PP and fiber processing conditions.

Designed for Fiber and Nonwoven Systems

Designed primarily for PP fiber systems, including spunbond, meltblown, staple fiber, and bicomponent applications, with application-specific optimization based on fiber construction, processing conditions, and performance requirements.

TECHNICAL PERFORMANCE

Hydrophilic Performance Measured Across Three Critical Attributes

nZorb™ has been evaluated through application testing to characterize hydrophilic performance across representative fiber formulations. Testing measures liquid absorption time, absorbency capacity, and vertical wicking rate to evaluate different aspects of liquid behavior in nonwoven structures.

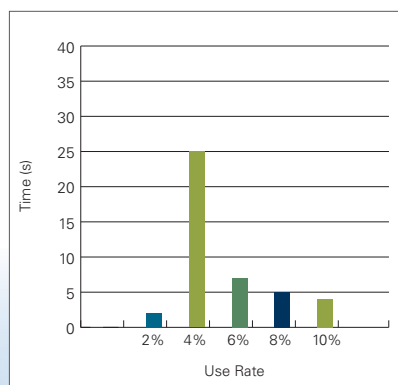
Lower absorption time indicates faster wet-out, while higher vertical wicking rate indicates more effective capillary transport through the web. Together, these measurements show how effectively the material acquires liquid and distributes it away from the point of contact.

Spunbond Performance

Reduced wet-out time with increased absorbency capacity and higher vertical wicking rates.

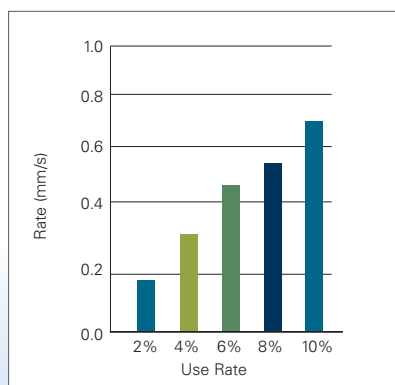
Liquid Absorption Time

Lower values indicate faster wet-out.



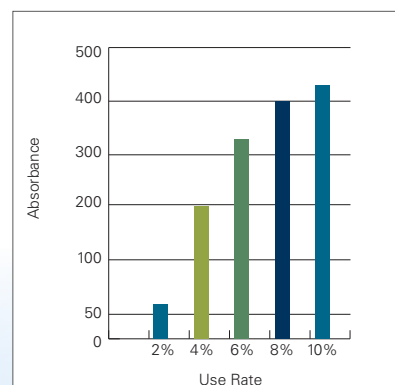
Liquid Wicking Rate Vertical

Higher values indicate more efficient capillary transport through the web.



Liquid Absorbance Capacity

Measures overall liquid uptake within the nonwoven structure.



nZorb™ enables faster wet-out and more efficient capillary transport through nonwovens while maintaining or increasing overall liquid-handling capacity.

TECHNICAL PERFORMANCE

Performance Optimized for Fiber and Nonwoven Applications

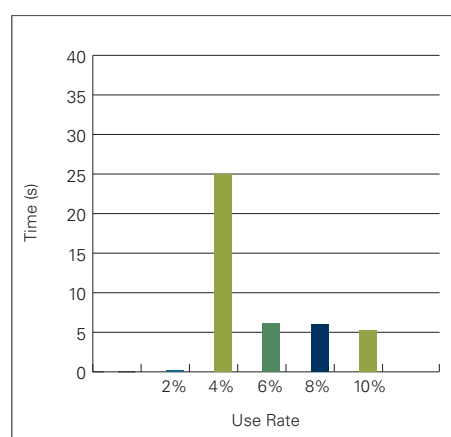
Hydrophilic performance depends on both additive formulation and nonwoven construction. Fiber characteristics and web structure influence how quickly liquid enters the material, how efficiently it moves through the web, and how much liquid the structure can ultimately hold. This makes application-specific formulation and use-rate selection an important part of nZorb™ development.

Meltblown Performance

Reduced wet-out time with increased absorbency capacity and higher vertical wicking rates.

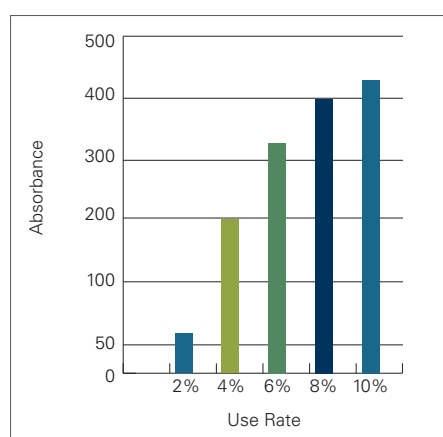
Liquid Absorption Time

Lower values indicate faster wet-out.



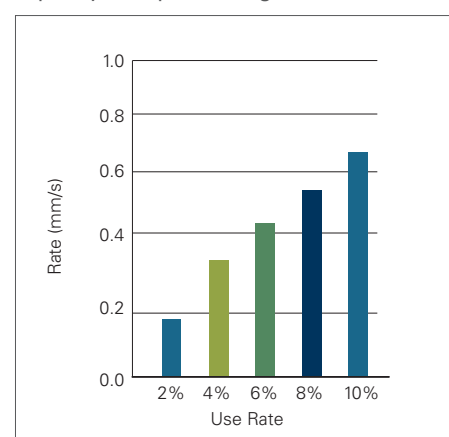
Liquid Absorbance Capacity

Measures overall liquid uptake within the nonwoven structure.



Liquid Wicking Rate

Higher values indicate more efficient capillary transport through the web.



Understanding the Performance Profile

Absorption time, absorbency capacity, and vertical wicking rate measure different aspects of liquid handling. Faster wet-out and more efficient capillary transport provide strong evidence of hydrophilic surface behavior, while absorbency capacity helps characterize overall liquid uptake within the finished nonwoven structure.

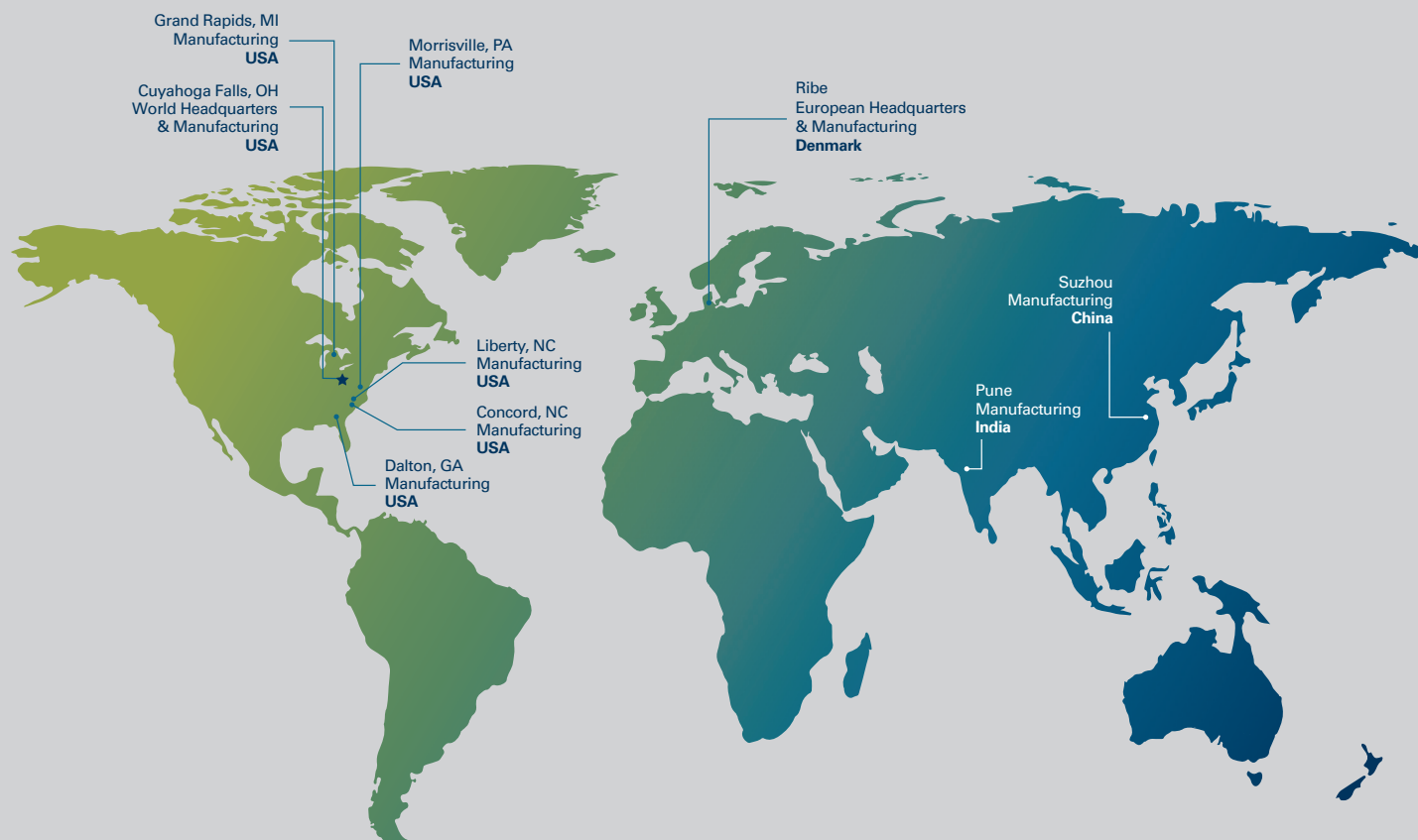
The relative importance of each measurement depends on the end use. Hygiene products, wipes, medical nonwovens, and filtration media can require different balances of liquid acquisition, distribution, retention, and processing performance. nZorb™ supports application-specific optimization to address those requirements.

Application-Specific Development

Americhem works with customers to evaluate formulation and use rate against fiber system, fabric construction, processing conditions, and end-use performance targets. Ladder studies help determine how changes in additive loading influence hydrophilic performance and support selection of the appropriate solution for the application.

The right hydrophilic performance profile depends on the application. nZorb™ provides a platform for optimizing wet-out, wicking, absorbency, and liquid handling around specific fiber and nonwoven requirements.

A GLOBAL LEADER IN FIBERS



BATCH TO BATCH. MARKET TO MARKET. CONTINENT TO CONTINENT.

From our headquarters in Cuyahoga Falls, Ohio, to our manufacturing locations and sales offices across the world, our expansive footprint provides global reach for your organization's needs. Not only are we dedicated to getting your materials where they need to be, when they need to be there, we work behind the scenes to reduce your supply risks. In addition to our network of plants, regulatory and compliance teams, we have contingency plans and support services in place to secure your product against unforeseen interruptions.



Explore more
functional additives
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About Americhem

Americhem is a global leader in custom color and additive solutions, offering unmatched performance, consistency, and sustainability for polymer products. Our innovative masterbatches help customers achieve faster speed to market, reduced production costs, and superior product performance in the nonwovens industry.



2000 Americhem Way
Cuyahoga Falls, OH, 44221 USA

Phone: +1.888.337.3226
Web: www.Americhem.com

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