



# Dry and Presaturated Wipes for Critical Environments

*Clean counts most*



## About Contec® Cleanroom

Contec, Inc. is a leading manufacturer of contamination control products for critical cleaning in manufacturing environments worldwide. Contec's cleanroom wipes, mops and disinfectants are used in various industries across the globe including biotechnology, pharmaceutical, medical device, microelectronics, and other critical life science applications.

**Experienced:** With more than 35 years experience, we understand the unique cleaning and contamination control requirements of these highly regulated markets. Our sales and technical support teams are fully trained to assist customers in finding or creating a Contec product that best meets their needs. With experienced, long-established sales representatives all over the world, our customers benefit from personalized service and fast, efficient sample and order turnaround.

**Global:** Contec owns and operates manufacturing facilities in Spartanburg, South Carolina, Ashington, UK, and Suzhou, China. Contec has distribution centers in Toledo, Ohio, and Vannes, France. Contec has operational, sales, and technical service teams in North America, Europe, and Asia. These facilities and dedicated team members give Contec the ability to provide product and technical support to multinational customers with global needs.

**Committed to quality:** We recognize our customers as the center of our organizational structure. Our employees are committed to meeting each customer's specifications and exceeding each customer's expectations. We will achieve this through periodic review and continuous improvement of all processes in our management system.

All manufacturing sites are currently certified to ISO 9001:2015, which ensures customers of consistent quality products - from development to delivery. As a vertically integrated manufacturer, Contec controls more of the manufacturing process than any other supplier. We invite you to come and visit our manufacturing facilities and find out for yourselves.

**Committed to customers:** Contec's customer-first approach means that we provide side-by-side support to help solve your cleaning challenges. Product samples, demonstrations and trials are always offered free- of-charge. We have regional technical specialists working with our professional sales staff who will come to your location and recommend the best product and practices for your needs. If necessary, we can develop unique custom solutions to your problems.



# Contec® Cleanroom Wipes

## A wide range of dry and presaturated, knitted and nonwoven wipes specifically designed for cleanroom applications

With more than 35 years of experience in the processing of knitted wipes, Contec® has developed the most complete range of wipes and mopping products for the life science industry. Contec offers an extensive line of cleanroom wipes designed to meet the requirements of some of the most critical environments in the world. This includes various wipe options for different uses, including sterile and nonsterile, dry and presaturated, and microfiber wipes.

In 1992, Contec pioneered the use of presaturated wipes for industrial use. In 1992, Contec pioneered the use of presaturated wipes for industrial use. This industry-leading innovation has led to one of the widest ranges of presaturated wipes for cleanroom applications. Recent innovations in the range include wipes with guaranteed low endotoxin levels and wipes made from recycled plastic bottles.

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Looking for disinfectant wipes? We have several options available! Visit our website [cleanroom.contecinc.com/products](https://cleanroom.contecinc.com/products) to find the option best suited for your facility.

## Guide to efficient wiping

Cleanrooms and other controlled environments require stringent control of particles, residues, and microorganisms to ensure the desired product or process outcome. The control of these critical parameters is very often achieved by the use of wipes, either dry or presaturated. Studies have shown that wiping is the most effective method of cleanroom cleaning.<sup>1</sup> Presaturated wipes in particular, are highly suitable for capturing and removing particles and dirt, disturbing biofilms and removing residues.

Wipes are especially good, not only at picking up dirt and particles, but retaining them and allowing the dirt and particles to be physically removed from the cleanroom. The ability of a wipe to retain and remove a particle or fiber depends on the structure of the wipe and the size of the contaminant. Wetting the wipe significantly enhances particle entrapment and removal. In addition, Contec has developed innovative surface treatments for dry wipes in order to enhance particle removal and retention.

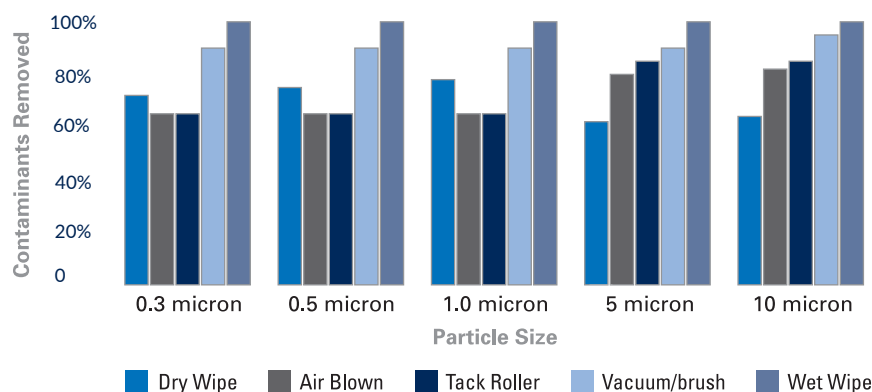
A single facility may need a number of different wipe substrates, sizes and formats to cover all the requirements of the different processes and room grades within the facility. Contec has developed the widest selection of knitted wipes using a variety of fabric types, edge technology and processing options. By adapting these options to meet different cleaning and wiping needs, Contec has engineered a family of pharmaceutical wipes which can be confidently used from Grade A product contact areas through to unclassified support rooms.

### Dry or presaturated?

Various studies have shown that wiping with saturated wipes is a very effective way to control contamination on a hard surface.<sup>1</sup> Studies of particle adhesion to surfaces have shown that the predominant force binding particles to a surface is a capillary force.<sup>2</sup> The use of a wipe presaturated with a low surface tension fluid such as alcohol helps to lower the surface tension of this binding force facilitating the removal of the particle. Wetting a wipe further enhances its ability to trap particles. Using a wetted wipe provides an overpowering bias for the particles to remain with the wipe so once the wipe is removed from the environment, the particles go with it, resulting in the most effective method for removing particles from a cleanroom surface. Presaturated wipes offer many other benefits; including increased solvent control, reduced VOC emissions, increased convenience, increased consistency and repeatability whilst lowering validation time.

The benefits when used for disinfection could be even more significant according to a study which compared the spread of microbial contamination on surfaces cleaned with dry wipes sprayed with alcohol to those cleaned with presaturated wipes.<sup>3</sup>

### Cleaning Effectiveness Method Comparison<sup>1</sup>



"Presaturated wipes in particular, are highly suitable for capturing and removing particles and dirt, disturbing biofilms and removing residues"



## How to wipe

For the wiping process to be successful the wipe must come into intimate contact with the unwanted contaminants and the process must be consistent and repeatable. There are many areas in a cleanroom where consideration needs to be given to whether the particles are being shielded, Fig 1. Difficult to clean areas should always be cleaned first, especially areas where particles may be difficult to reach.

Technique is also important to prevent the captured contamination being redeposited on a surface. Some general best practice rules include:

- Fold the wipe to ensure that even pressure can be applied across the wipe. It also means that a clean side of the wipe can be presented to the surface on every stroke ensuring no contaminants are redeposited on the surface. Fold the wipe in half and then in half again, this produces up to 8 clean sides to be used. Fig 2.
- Pick up the quarter folded wipe at the open edges. Grasp the unfolded edges between the thumb and forefinger. When wiping, place equal pressure across the edge of the hand, holding the fingers together and pulling across the surface to be cleaned, ensuring that the open edges are lifted away from the surface. Angling the hand slightly allows the folded edge of the wipe to remain in consistent contact with the surface.
- Use pull and lift technique, shown in Figure 3. Lifting the wipe at the end of every stroke ensures that any contamination is removed from the surface.
- At the end of every stroke, either flip or refold the wipe, exposing a clean surface. A general rule is that the wipe surface needs to be changed every 10 wipe lengths.
- It is important to ensure no area is missed. To facilitate this, wiping in straight lines with overlapping strokes will mean every centimeter is covered. To prevent a miniscule gap between the strokes, each stroke should overlap the previous by 10 – 25%. Wiping should never be carried out in a circular motion as this causes the wipe in its dirtiest state to be passed over an area which has just been cleaned.
- Wiping should be carried out from the cleanest area to the dirtiest, most critical to least critical. This will usually be from top to bottom, back to front, driest to wettest.

Fig 1

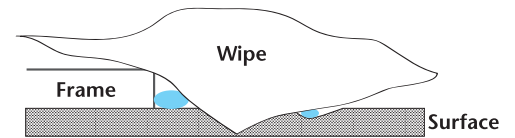


Fig 2

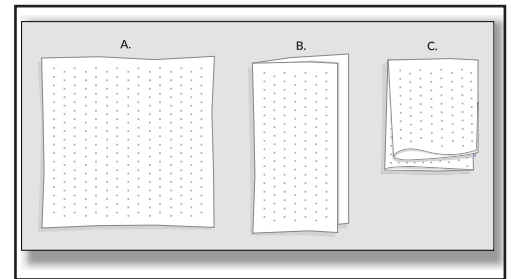


Fig 3

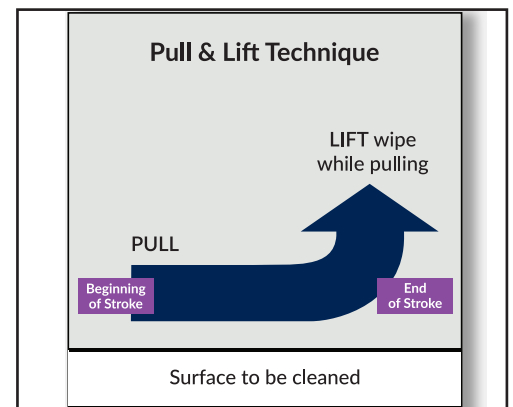
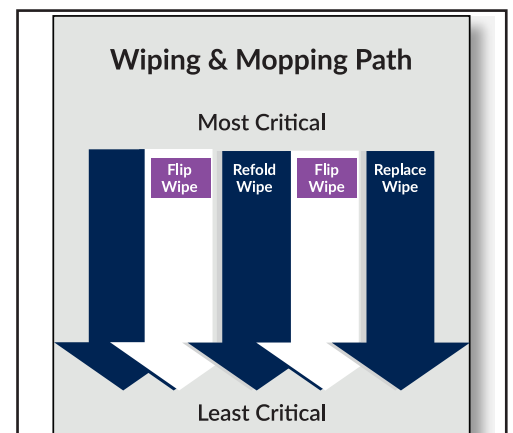


Fig 4



“...our results clearly demonstrated, in a quantitative manner, that alcohol pre-impregnated wipes are more effective at reducing surface bioburden than dry wipes sprayed with alcohol.”<sup>3</sup>

(1) Cleaning Effectiveness Method Comparison: Contec Presentation 1996: D Nobile

(2) Wiping Surfaces Clean: Vicon Publishing 2004: H Siegeman Ph.D

(3) Evaluation of alcohol wipes used during aseptic manufacturing: The Society for Applied Microbiology, Letters in Applied Microbiology 48 648-651: M.N. Panousi, G.J. Williams, S. Girdlestone, S.J. Hiom and J.-Y. Maillard (2009)

## Choosing a cleanroom wipe

Contec provides a wide selection of cleanroom wipes with various materials, edge technologies, configurations, and processing choices. These wipes are available for sterile and nonsterile use, in dry and presaturated forms, and include knitted, nonwoven, and microfiber options.

“Contec provides a wide selection of cleanroom wipes with various materials, edge technologies, configurations, and processing choices.”

### Wipe characteristics

The characteristics of individual wipes affect their performance. Very often a compromise needs to be made between the different attributes. The decision of which wipe to choose for a particular application should be risk based, dependant on the relative impact on a product or process.

Care should be taken when comparing results, as comparing technical data from various sources is an inexact science due to the variability between different test methods and different testing equipment. The test methods for particles and fibers often vary considerably and the results even more so.

**Cleanliness:** Every wipe will contain some contaminants, so it is important to minimize the deposition onto critical surfaces during wiping. Laundered, sealed edge, synthetic wipes are the cleanest available option; however, they are also less sorbent and more expensive than wipes made of natural fibers. Test results are usually declared for particles and fibers. Fibers are generally referred to as individual “long” particles over 100µm.

**Sorbent properties:** The ability of the substrate to absorb liquids. Sorbent properties are critical for the removal of liquids, especially when wiping to dry. Test results are generally available for the intrinsic and extrinsic sorbency and the rate of sorption. Intrinsic sorbency is usually reflected as ml/g and extrinsic sorbency as ml/m<sup>2</sup>.

Wipes containing natural fibers have better sorbent properties, however they tend to release higher levels of particulates and fibers. In general, synthetic wipes (polyester and polypropylene) tend to become more sorbent as the filament size is reduced, with microfiber products being the most sorbent option. Polyester wipes can be treated during the finishing process to improve their sorbency.

**Weight:** Often expressed as g/m<sup>2</sup>, this variable has an effect on sorbent capacity and cost.

**Chemical compatibility:** Pure synthetics such as polyester nonwovens and knitted fabrics offer the greatest range of chemical compatibility, while those containing cellulose are susceptible to degradation by moderately caustic solutions and are not suitable for use with all disinfectants.

**Metallic and other ions:** Semiconductor and data storage industries are genuinely concerned about ion contamination from a wipe. For the most sensitive industries, wipes with individual ion levels below 1ppm are utilized.

### Wipe classification

Wipes are very often grouped by substrate and their manufacturing process as these all have an affect on the characteristics above.

**Material used:** Synthetic, natural, or blended fibers. Generally synthetic materials have longer fibers that are cleaner than natural fibers.

**How the wipe is constructed:** Knitted, nonwoven (hydroentangled, meltblown, chemically bonded) or woven.

**How is it converted into wipes:** Knife-cut, or cut and sealed edges. Sealed edges reduce the release of particles and fibers.

**Whether it has been treated or laundered:** Laundering reduces all key contamination criteria. Sorption enhancers and particle attraction treatments can be added during finishing.



## Pharmaceutical cleanroom wipes

Microbiological contamination is a critical concern for manufacturers of pharmaceutical and medical device products. Annex 1 of cGMP states that “Disinfectants and detergents used in Grades A and B areas should be sterile prior to use.” All cleaning products including wipes used in aseptic areas, are usually sterilized, or provided sterile by the supplier to prevent compromising the cleanroom. This allows the manufacturer to focus on core activities.

### Sterile Wipes

Sterility is the absence of living organisms. The Sterility Assurance Level (SAL) of a product is defined as the probability of any given unit being nonsterile after exposure to a validated sterilization process.

Contec's validated sterile wipes are sterilized by Cobalt-60 Gamma Radiation and validated to a Sterility Assurance Level (SAL) of  $10^{-6}$  in accordance with standards and recommended practices of Association for the Advancement of Medical Instrumentation (AAMI) Guidelines. This means there is less than a one in one million probability that the product contains a viable microorganism.

Contec can offer both sterile knitted 100% polyester wipes and a range of nonwoven wipes. Each product is either double or triple packaged to ensure product integrity and uncompromised entry into the aseptic suite. Small packaging configurations in easy-to-open bags and pouches are used for sterile wipes, to help keep wipe waste to a minimum.

The label provides lot numbers and expiration dates for lot traceability. A validation package is available to support all sterile products. Each batch of sterile product comes with lot-specific Certificates of Conformance and Sterilization.



All Contec's validated sterile products are highlighted with the green  $10^{-6}$  symbol.

### Pyrogens and Endotoxins

A pyrogen is quite simply a fever producing substance. Some of the most common types of pyrogens are bacterial endotoxins. These are derived from the outer cell membranes of gram-negative bacteria and are released upon breakdown of the cell wall or bacterial cell lysis. The terms endotoxin and pyrogen are often used interchangeably. Products containing pyrogens (endotoxins) can pose a life-threatening risk to patients.

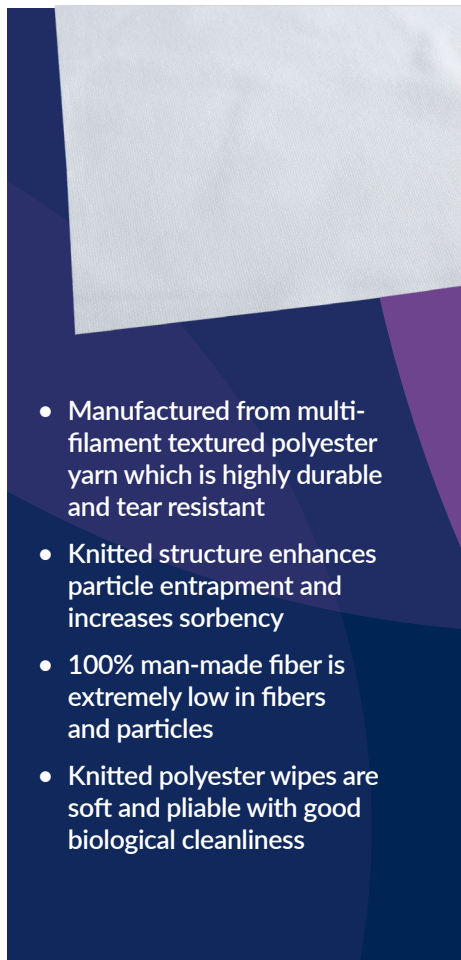
A sterile product is not necessarily pyrogen/endotoxin free. The process of sterilization only ensures the absence of viable living bacteria. If a product is manufactured with very low levels of initial bioburden in clean conditions it is possible to create products where only very small numbers of endotoxins are created during the sterilization process.

Endotoxins are measured in Endotoxin Units, usually expressed as EU/ml or EU/device. Contec can offer both dry and presaturated wipes with guaranteed low levels of endotoxin contamination. All of Contec's low endotoxin contamination control consumables are batch tested using the Limulus Amebocyte Lysate test for quantification of endotoxin levels.



All Contec's Low Endotoxin products are highlighted with the purple LE symbol. They are all validated sterile to  $10^{-6}$  SAL.

“The use of low endotoxin products for cleaning and contamination control can help to minimize the risk of endotoxin contamination.”



- Manufactured from multi-filament textured polyester yarn which is highly durable and tear resistant
- Knitted structure enhances particle entrapment and increases sorbency
- 100% man-made fiber is extremely low in fibers and particles
- Knitted polyester wipes are soft and pliable with good biological cleanliness

## Contec® Knitted Polyester Wipes

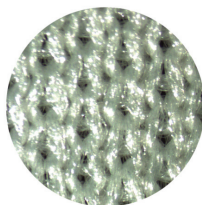
Laundered polyester knits are the cleanest category of wipes for critical environments. These wipes are made from multi-filament textured polyester yarns that offer an excellent balance of sorbency and cleanliness. Through years of continuous improvement, Contec has created processes that minimize non-volatile residues (NVRs) and particles, yet result in a sorbent wipe with good functionality.

Contec has created the widest selection of knitted wipes using a variety of fabric types, edge technologies and processing options. By changing these parameters to meet different requirements, Contec has a range of products which meets the needs of many different customers.

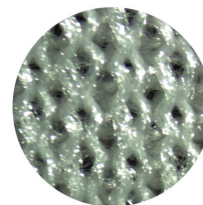
The wipes are available with soft knife-cut edges and cleaner laser-cut edges. The wipes are laundered and packed in an ISO cleanroom and are available double or triple bagged in cleanroom compatible packaging. Each bag is labeled with a lot number for traceability.

### Types of knitted wipes

Wipes can be knitted in a variety of ways to improve the performance characteristics. All Contec's knitted wipes are created using an interlock knit which is a variation of a rib knit where any given stitch will reveal another knit stitch. This makes the wipe more durable and provides a slightly heavier basis weight.



Interlock



No-run interlock knit

Contec's knitted wipes are available in two different weights, standardweight (120g/m<sup>2</sup>) and heavyweight (140g/m<sup>2</sup>). All Contec's heavyweight wipes are created using a no-run interlock knit. This is similar to the interlock knit but with an additional periodic stitch which prevents the fabric from unraveling if snagged. This makes the wipe very durable and suitable for use on a wide variety of surfaces.

Contec also has a range of microfiber wipes to choose from; 100% polyester standard fiber/microfiber blends, polyester/nylon blends and a unique microfiber/polypropylene option.

### 2-ply quilted polyester

2-ply quilted polyester wipe in a laminated construction. The lamination of two layers of fabric allows the final product to have more than twice the sorbency of two single ply layers. It is the most sorbent sealed edge wipe available.

### 100% knitted polyester with sealed edges

Knitted 100% textured polyester wipes with laser-cut sealed edges. Laser cutting seals the fibers at the edge of the wipe, creating very low levels of particles and fibers.

### 100% knitted polyester

Also knitted from 100% textured polyester filament, these wipes are knife-cut. A knife-cut edge provides a very soft edged wipe that is nonabrasive.

# Quiltec® I Wipes

## 2-ply quilted polyester with sealed edges

### Product information

**Quiltec® I Wipes** offer the highest sorptive capacity of any sealed wipe available. These wipes are manufactured using two layers of knitted polyester fabric laminated together to form a stronger more sorbent wipe. Additional fluid is captured within the quilted pockets between the fabric layers making it twice as sorbent as a single ply polyester wipe.

Quiltec I have laser-cut, heat sealed edges which minimize the release of particles and fibers. It is laundered and packed in an ISO cleanroom. As a knitted polyester product, it is abrasion and chemical resistant and extremely low in particles and fibers.

**Sterile Quiltec® Wipes** are also laundered and packed in an ISO cleanroom before sterilization via gamma irradiation. All Contec's sterile dry wipes are validated sterile to a  $10^{-6}$  SAL per ANSI/AAMI/ISO 11137 guidelines for the sterilization of medical devices.

Small packaging configurations in easy to open bags are ideal for sterile use and help keep wipe waste to a minimum. A certificate of sterility is provided with each shipment.

- Recommended for ISO Class 3-8 environments
- 2-ply quilted polyester wipes for increased strength, durability and sorbency
- Extremely low levels of particles and fibers
- Ideal for sorbing spills or when a durable wipe is needed.

Part No.	Description	Size	Packaging
QT1-99	Quiltec I Wipes Flat stacked	9" x 9" (230 x 230 mm)	50/bag; 20 bags/case
QT1-1212	Quiltec I Wipes Flat stacked	12" x 12" (305 x 305 mm)	50/bag; 10 bags/case
LWQT0019	Quiltec I Wipes Flat stacked	18" x 18" (460 x 460 mm)	25/bag; 8 bags/case
QT1-66B	Quiltec I Wipes Bulk	6" x 6" (150 x 150 mm)	200/bag; 10 bags/case
QT1-99B	Quiltec I Wipes Bulk	9" x 9" (230 x 230 mm)	150/bag; 6 bags/case
QT1-1212B/100	Quiltec I Wipes Bulk	12" x 12" (305 x 305 mm)	100/bag; 5 bags/case
LWQS0002	Sterile Quiltec I Wipes Flat stacked	12" x 12" (305 x 305 mm)	25/bag; 20 bags/case



# Anticon® Gold HeavyWeight™ Wipes

100% no-run interlock knit polyester with sealed edges and increased sorbency

## Product information

**Anticon® Gold HeavyWeight™** wipes offer high sorptive capacity and fast sorption rate for superior spill control. Made from 100% continuous filament polyester and a double-knit no-run interlock construction. Anticon Gold HeavyWeight uses patented textile technology to achieve superior sorption for disinfectant and solvent applications.

Processed in an ISO cleanroom, Anticon Gold HeavyWeight wipes exhibit low particle and fiber counts. The laser sealed edges further reduce particle and fiber generation for use in critical environments.

**Anticon® Sterile Gold™ Wipes** are packaged in easy tear bags containing a smaller count of wipes to reduce waste. Gamma irradiated and validated sterile to a 10<sup>-6</sup> SAL per ANSI/AAMI/ISO 11137 guidelines, these wipes are ideal for use in the most critical life science cleanrooms.

- Recommended for ISO Class 3-8 environments
- High sorptive capacity and fast sorption rate for superior spill control
- Manufactured from 100% continuous filament polyester and specially processed for superior cleanliness and sorbency
- Ideal for critical cleanrooms that require extremely low levels of particles

Part No.	Description	Size	Packaging
492224-789	Anticon Gold HeavyWeight Wipes Flat stacked	9" x 9" (230 x 230 mm)	75/bag; 16 bags/case
492224-790	Anticon Gold HeavyWeight Wipes Flat stacked	12" x 12" (305 x 305 mm)	50/bag; 8 bags/case
492224-783	Anticon Gold HeavyWeight Wipes Flat stacked	15" x 18" (390 x 460 mm)	25/bag; 24 bags/case
492224-798	Anticon Gold HeavyWeight Wipes Bulk	4" x 4" (102 x 102 mm)	300/bag; 16 bags/case
492226-942	Anticon Sterile Gold HeavyWeight Wipes Flat stacked	 12" x 12" (305 x 305 mm)	20/bag; 20 bags/case
492226-944	Anticon Sterile Gold HeavyWeight Wipes Flat stacked	 12" x 12" (305 x 305 mm)	20/bag; 20 bags/case



# Polynit Heatseal Wipes

## 100% no-run interlock knit polyester with sealed edges

### Product information

**Polynit Heatseal** wipes offer good sorbency with solvents and are abrasion and chemical resistant. Processed in an ISO cleanroom, the 100% knitted textured polyester wipes contain laser cut sealed edges for very low levels of particles and fibers.

The no-run interlock knit wipes include an additional periodic stitch which prevents the fabric from unraveling if snagged.

**Sterile Polynit Heatseal Wipes** are gamma irradiated and validated sterile to a  $10^{-6}$  SAL per ANSI/AAMI/ISO 11137 guidelines so they can be used in the highest-grade life science cleanrooms.

**Sterile Polynit Heatseal LE Wipes** have a guaranteed endotoxin level of  $<1$  EU/wipe and are validated sterile to  $10^{-6}$  SAL, making them ideal for use in product contact areas.

The wipes are half folded and triple packaged in linear tear outer bags for ease of transfer into Grades A/B cleanrooms. This smaller packaging takes up less space making it ideal for mini environments. The small quantity of wipes per package can easily be used during one cleaning session, eliminating waste.

A certificate of sterility and endotoxin limit is provided with each shipment.

- Recommended for ISO Class 3-8 environments
- 100% knitted polyester is abrasion and chemical resistant
- Ideal for customers using solvents to clean and disinfect

Part No.	Description		Size	Packaging
PNHS-99	Polynit Heatseal Wipes Flat stacked		9" x 9" (230 x 230 mm)	150/bag; 8 bags/case
LWPS0030	Polynit Heatseal Wipes Flat stacked		9" x 9" (230 x 230 mm)	150/bag; 8 bags/case
PNHS-1212	Polynit Heatseal Wipes Flat stacked		12" x 12" (305 x 305 mm)	75/bag; 10 bags/case
PNHS-99B	Polynit Heatseal Wipes Bulk		9" x 9" (230 x 230 mm)	300/bag; 4 bags/case
PNHS-99B/150	Polynit Heatseal Wipes Bulk		9" x 9" (230 x 230 mm)	150/bag; 8 bags/case
PN-99 IR	Sterile Polynit Heatseal Wipes Flat stacked	 Sterile	9" x 9" (230 x 230 mm)	10/bag; 100 bags/case
LWPS0006	Sterile Polynit Heatseal Wipes Flat stacked	 Sterile	9" x 9" (230 x 230 mm)	25/bag; 48 bags/case
LWPS0007	Sterile Polynit Heatseal Wipes Flat stacked	 Sterile	12" x 12" (305 x 305 mm)	25/bag; 40 bags/case
LWLE0001	Sterile Polynit Heatseal LE Wipes Half folded	 Low Endotoxin	9" x 9" (230 x 230 mm)	10/bag; 50 bags/case
LWLE0002	Sterile Polynit Heatseal LE Wipes Half folded	 Low Endotoxin	12" x 12" (305 x 305 mm)	10/bag; 36 bags/case



## Anticon® 100 HeavyWeight™ Wipes

100% no-run interlock knit polyester with knife-cut edges

### Product information

Contec's **Anticon® 100 HeavyWeight™** wipes offer excellent sorbency for spill control while the knife-cut edges minimize scratching. These wipes are made from 100% continuous filament polyester with a double-knit no-run interlock construction. The wipes are laundered and packaged in an ISO cleanroom and exhibit very low particle and fiber counts for a knife-cut wipe.

Using patented textile technology Anticon 100 HeavyWeight wipes achieve superior sorption capacity with a quick sorption rate.

**Anticon® Sterile 100™ Wipes** are gamma irradiated and validated sterile to a  $10^{-6}$  SAL per ANSI/AAMI/ISO 11137 guidelines so it can be used in the highest-grade life science cleanrooms.

Part No.	Description	Size	Packaging
492222-813	Anticon 100 HeavyWeight Wipes Flat stacked	9" x 9" (230 x 230 mm)	75/bag; 16 bags/case
492222-815	Anticon 100 HeavyWeight Wipes Flat stacked	12" x 12" (305 x 305 mm)	50/bag; 8 bags/case
492226-939	Anticon Sterile 100 Wipes Flat stacked	9" x 9" (230 x 230 mm)	20/bag; 40 bags/case



## Polynit Wipes

100% no-run interlock knit polyester with knife-cut edges

### Product information

**Polynit Wipes** are made of 100% knitted textured polyester with knife-cut are ideal for surfaces which are vulnerable to scratching. The polyester wipes are chemically resistant and exceptionally low in particles and fibers.

The wipes are laundered and packaged in an ISO cleanroom.

Part No.	Description	Size	Packaging
PN-44	Polynit Wipes Flat stacked	4" x 4" (102 x 102 mm)	300/bag; 16 bags/case
PN-99	Polynit Wipes Flat stacked	9" x 9" (230 x 230 mm)	75/bag; 16 bags/case
PN-1212	Polynit Wipes Flat stacked	12" x 12" (305 x 305 mm)	75/bag; 10 bags/case
PN-1818	Polynit Wipes Flat stacked	18" x 18" (460 x 460 mm)	50/bag; 6 bags/case

# Anticon® Gold StandardWeight™ Wipes

100% interlock knit polyester with sealed edges

## Product information

**Anticon® Gold StandardWeight™** Wipes have high sorptive capacity and fast adsorption rates for superior spill control. These wipes are made from 100% continuous filament polyester with a double-knit no-run interlock construction. The sealed edge reduces the amount of fibers released from the wipe. The wipes are cleanroom laundered and packaged in an ISO cleanroom and generate very low levels of particles and fibers, helping to minimize contamination. These wipes are ideal for use in the most critical of cleanroom environments. The lighter basis weight provides superior value for general cleaning applications.

Using patented textile technology Anticon Gold StandardWeight wipes achieve superior sorption capacity with a quick sorption rate.

Part No.	Description	Size	Packaging
495353-902	Anticon Gold StandardWeight Wipes Flat stacked	9" x 9" (230 x 230 mm)	150/bag; 8 bags/case
495353-904	Anticon Gold StandardWeight Wipes Flat stacked	12" x 12" (305 x 305 mm)	100/bag; 4 bags/case
495353-903	Anticon Gold StandardWeight Wipes Bulk	9" x 9" (230 x 230 mm)	150/bag; 8 bags/case

- Recommended for ISO Class 3-8 environments
- Sealed edges reduce particle and fiber generation
- Ideal for the most critical applications involving delicate surfaces

# Polywipe-C Heatseal Wipes

100% interlock knit standard weight polyester with sealed edges

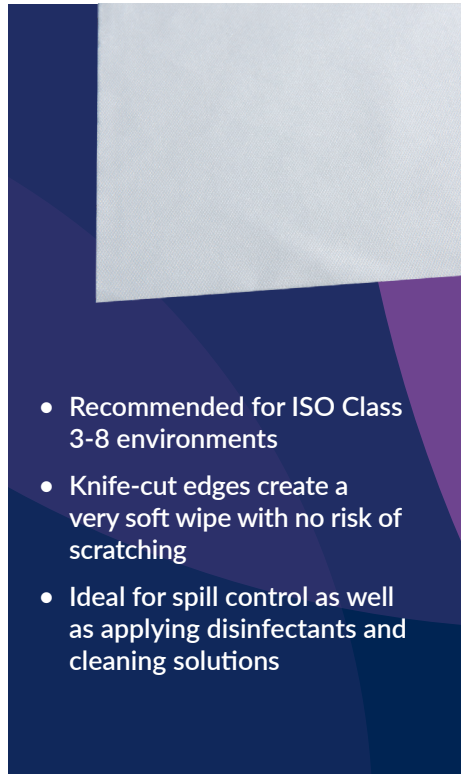
## Product information

**Polywipe-C Heatseal** Wipes are chemical resistant and exceptionally low in particles and extractable residue making it ideal for critical cleaning. These wipes are made from a 100% knitted polyester that is laser-cut to bond the fibers at the edges of the wipe. The wipes are laundered and packed in an ISO cleanroom.

**Sterile Polywipe-C Heatseal Wipes** are also laundered and packed in a cleanroom before sterilization via gamma irradiation. All Contec's sterile dry wipes are validated sterile to a 10<sup>-6</sup> SAL per ANSI/AAMI/ISO 11137 guidelines.

Part No.	Description	Size	Packaging
PCHS-99	Polywipe-C Heatseal Wipes Flat stacked	9" x 9" (230 x 230 mm)	75/bag; 24 bags/case
PCHS-1212	Polywipe-C Heatseal Wipes Flat stacked	12" x 12" (305 x 305 mm)	75/bag; 10 bags/case

- Recommended for ISO Class 3-8 environments
- Extremely low in both particles and extractables
- Ideal for cleaning surfaces without scratching



- Recommended for ISO Class 3-8 environments
- Knife-cut edges create a very soft wipe with no risk of scratching
- Ideal for spill control as well as applying disinfectants and cleaning solutions

## Anticon® 100 StandardWeight™ Wipes

100% interlock knit polyester with knife-cut edges

### Product information

**Anticon® 100 StandardWeight™ Wipes** have low particle and fiber counts to minimize contamination. They are made from 100% continuous filament polyester with a double-knit no-run interlock construction. The knife cut edges create a very soft wipe which reduces the risk of scratching and allows the use of the entire wipe.

The wipes are cleanroom laundered and packed in an ISO cleanroom. Using patented textile technology, Anticon 100 StandardWeight Wipes achieve high sorption capacity with a quick sorption rate.

**Anticon® 100 Wipes** are the knife-cut equivalent of Anticon® Gold StandardWeight™ Wipes.

Part No.	Description	Size	Packaging
495352-803	Anticon 100 StandardWeight Wipes Flat stacked	9" x 9" (230 x 230 mm)	75/bag; 16 bags/case
495352-805	Anticon 100 StandardWeight Wipes Flat stacked	12" x 12" (305 x 305 mm)	50/bag; 8 bags/case
495352-804	Anticon 100 StandardWeight Wipes Bulk	9" x 9" (230 x 230 mm)	75/bag; 16 bags/case



- Recommended for ISO Class 5-8 environments
- Knife-cut edges create a very soft edged wipe
- Ideal for general cleaning applications

## Polywipe-C Wipes

100% interlock knit standard weight polyester with knife-cut edges

### Product information

**Polywipe-C Wipes** are chemical resistant and very low in particles and extractable residue making it ideal for critical cleaning. These wipes are made from standard weight 100% knitted polyester that is knife-cut to create a soft edge. Soft edge wipes are ideal for use on surfaces which are vulnerable to scratching.

The wipe is chemical resistant and very low in particles and extractable residue making it ideal for critical cleaning. The wipes are laundered and packaged in an ISO cleanroom. The lighter basis weight provides superior value for general cleaning applications.

Part No.	Description	Size	Packaging
PC-99	Polywipe-C Wipes Flat stacked	9" x 9" (230 x 230 mm)	75/bag; 24 bags/case
PC-1212	Polywipe-C Wipes Flat stacked	12" x 12" (305 x 305 mm)	75/bag; 10 bags/case



# ReFIBE™ StandardWeight Heatseal Wipes

Recycled 100% no-run interlock knit polyester with sealed edges

## Product information

**ReFIBE™ StandardWeight Heatseal Wipes** provide a sustainable solution for critical environments without jeopardizing quality or performance. These wipes are made of recycled 100% knitted polyester with laser-cut sealed edges. Polyester wipes are exceptionally low in particles and extractable residues making them ideal for critical cleaning.

Each wipe is constructed from 100% post-consumer recycled plastic bottles (35+ bottles per bag of wipes) that have gone through a rigorous cleaning process before being converted to polyester chips. The chip is extruded and spun in a traditional yarn manufacturing process before being knitted into fabric using an interlock knit. An interlock knit creates a durable fabric and the addition of a periodic stitch prevents the fabric from unraveling creating an even more durable fabric with strong edges.

This fabric is converted and laundered exactly the same as Contec's standard polyester heat sealed wipes. ReFIBE wipes are subject to the same quality and process control protocols as our virgin polyester products, eliminating the fear of compromising quality for sustainability. The wipes are laundered and packaged in an ISO cleanroom.

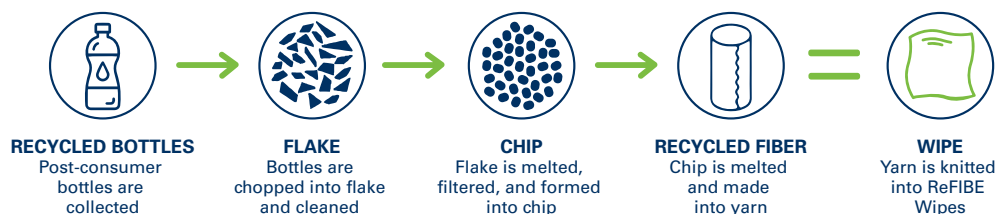
**Sterile ReFIBE StandardWeight Heatseal Wipes** are gamma irradiated and validated sterile to a 10<sup>-6</sup> SAL per ANSI/AAMI/ISO 11137 guidelines, suitable for use in the highest grade life science cleanrooms.

ReFIBE recycled 100% knitted polyester cleanroom wipes provide a sustainability story in a single-use world diverting plastic bottles from oceans and landfill. The use of recycled cleanroom wipes can help life science cleanroom users reduce their environmental impact to meet sustainability goals.

- Recommended for ISO Class 3-8 environments
- Manufactured from recycled plastic bottles - 35+ bottles per bag
- Ideal for companies looking for a sustainable polyester wipe



How does it work?



Part No.	Description		Size	Packaging	Av. Recycled Bottles
RFHS-99	ReFIBE StandardWeight Heatseal Wipes Flat stacked		9" x 9" (230 x 230 mm)	75/bag; 24 bags/case	840 per case
RFHS-1212	ReFIBE StandardWeight Heatseal Wipes Flat stacked		12" x 12" (305 x 305 mm)	75/bag; 10 bags/case	480 per case
RFHS-99IR	Sterile ReFIBE StandardWeight Heatseal Wipes, flat stacked	Sterile	9" x 9" (230 x 230 mm)	25/bag; 48 bags/case	560 per case
RFHS-1212IR	Sterile ReFIBE StandardWeight Heatseal Wipe, flat stacked	Sterile	12" x 12" (305 x 305 mm)	25/bag; 40 bags/case	640 per case

## Contec® Microfiber Wipes

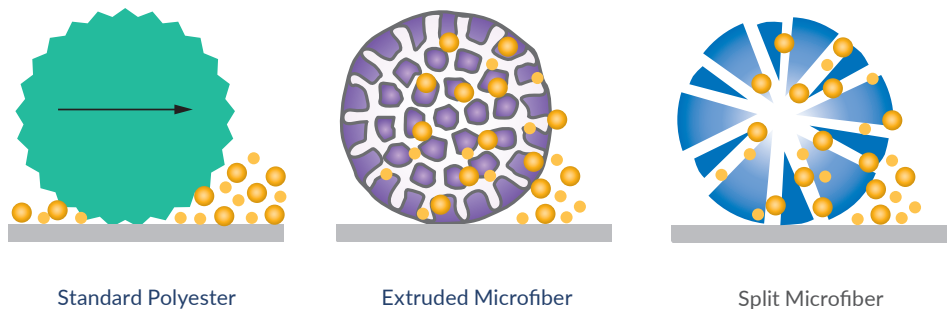
**Microfiber wipes** are the premium fabric for removing residues from surfaces. With outstanding sorbency, they are excellent for trapping and removing dry particles. New blends of microfiber and polypropylene produce a cost-effective single use wipe with all the benefits of microfiber.

Microfiber was introduced in the late 1980s. The definition of a microfiber is a fiber with less than 1 decitex per filament, 1 decitex is 9/10 of a denier about 1/16th the diameter of a human hair. The fibers can be combined to create yarn which can be then be knitted or woven into a variety of constructions. Microfiber wipes can be made using 100% polyester fine filaments or split fibers that are a blend of polyester and nylon.

This split structure gives the wipe the ability to pick up particles even when dry and can easily remove residues often without solvent. The increased surface area of a microfiber allows it to collect and hold dust, dirt and particles more effectively than rounded fabrics such as cotton. Virgin wipes are very soft so won't scratch surfaces; however, care should be taken when reusing microfiber wipes as particles can get stuck in the fibers which can then damage sensitive surfaces. Microfiber has a high sorption capacity around 6 to 8 times its own weight in water. The fast-wicking ability means a wipe can remove spills quickly and easily, so it is very suitable for mop to dry applications.

Contec has a wide range of microfiber wipes which include: 100% polyester standard fiber/ microfiber blend 80% polyester/20% nylon split microfiber and microfiber polyester yarn stitched into a polypropylene substrate.

- A range of microfiber wipes, including 100% polyester and polyester/nylon blends
- Excellent for residue and particle removal
- Highly sorbent, microfiber wipes can hold more solution than standard polyester knits





# Anticon® MicroQuilt Wipes

## Polyester/microfiber hybrid



### Product information

**Anticon® MicroQuilt** is the most sorbent and clean wipe Contec offers. This hybrid combines the cleanliness and sorbent capacity of Quiltex® with the microfiber particle pick-up ability of Anticon® Gold Sorb™. MicroQuilt is laser-cut with heat sealed edges and cleanroom laundered to reduce the number of releasable particles and fibers. Its unique microfiber construction provides superior residue and particle removal when used dry or wet.

The 2-ply, quilted layers absorb more liquid than other wipes but readily release fluids when applying to surfaces. Composed of microfiber polyester, the wipes are durable and compatible with a wide range of solutions and disinfectants.

**Sterile Anticon MicroQuilt Wipes** are also laundered and packed in an ISO cleanroom before sterilization via gamma irradiation. All Contec's sterile dry wipes are validated to a SAL of  $10^{-6}$ . Conveniently packaged in easy tear bags to eliminate wastage. A certificate of sterility is provided with each shipment.

- Recommended for ISO Class 3-8 environments
- 230 g/m<sup>2</sup> hybrid of polyester and microfiber for the most sorbent and clean wipe
- Unique microfiber polyester yarn offers high sorptive capacity and fast absorption rate
- Ideal for any cleanroom application requiring high sorption capacity and superior contaminant removal

Part No.	Description	Size	Packaging
495758-735	Anticon MicroQuilt Flat stacked	9" x 9" (230 x 230 mm)	50/bag; 20 bags/case
495758-737	Anticon MicroQuilt Flat stacked	12" x 12" (305 x 305 mm)	50/bag; 10 bags/case
495758-736	Anticon Sterile MicroQuilt Flat stacked	 <b>Sterile</b> 9" x 9" (230 x 230 mm)	25/bag; 40 bags/case
495758-738	Anticon Sterile MicroQuilt Flat stacked	 <b>Sterile</b> 12" x 12" (305 x 305 mm)	25/bag; 20 bags/case



- Recommended for ISO Class 3-8 environments
- Unique microfiber provides superior residue and particle removal even when dry
- Ideal for use in critical pharmaceutical environments

## Anticon® Gold Sorb™ Wipes



Blend of standard polyester and microfiber polyester with sealed edges

### Product information

**Anticon® Gold Sorb™** is a unique wipe which combines the performance of a microfiber yarn and polyester yarn to create superior wiping and sorption characteristics.

The sealed edges of these wipes reduce the amount of fibers released from the wipe. Anticon Gold Sorb wipes have no abrasive borders, making them particularly suitable for cleaning sensitive components. These wipes are laundered in an ISO cleanroom.

**Anticon® Sterile Gold Sorb™** is conveniently packaged in easy tear bags containing smaller counts to reduce waste. Anticon Sterile Gold Sorb is sterilized via gamma irradiation, and a certificate of sterility is provided with each shipment.

Part No.	Description		Size	Packaging
492238-956	Anticon Gold Sorb Wipes Flat stacked		9" x 9" (230 x 230 mm)	75/bag; 16 bags/case
492238-958	Anticon Gold Sorb Wipes Flat stacked		12" x 12" (305 x 305 mm)	50/bag; 8 bags/case
492238-957	Anticon Gold Sorb Wipes Bulk		9" x 9" (230 x 230 mm)	75/bag; 16 bags/case
492238-959	Anticon Gold Sorb Wipes Bulk		12" x 12" (305 x 305 mm)	50/bag; 8 bags/case
492238-955	Anticon Sterile Gold Sorb Wipes Flat stacked		9" x 9" (230 x 230 mm)	75/bag; 16 bags/case
492238-960	Anticon Sterile Gold Sorb Wipes Flat stacked		12" x 12" (305 x 305 mm)	25/bag; 40 bags/case

# Microsilk II Wipes

## 75% polyester/25% nylon microfiber wipe

### Product information

**MicroSilk II Wipes** offer excellent sorbency and a soft texture makes them an excellent wipe for cleaning delicate surfaces. These wipes are made with fabric densely knitted by continuous microdenier filaments. MicroSilk II wipes are constructed using split microfibers which helps trap particles during cleaning.

Laundered and double packaged in an ISO cleanroom. The unique structure of microfiber improves the surface contact, holds more dirt than average wipes, and provides more effective cleaning.

Part No.	Description	Size	Packaging
LWMD0201	Microsilk II Wipes Flat stacked	9" x 9" (230 x 230 mm)	50/bag; 20 bags/case

- Recommended for ISO Class 5-8 environments
- Holds more dirt than average wipes
- Ideal for surface cleaning and polishing, the wipe easily removes both oil-based and water-based residues

# MicroGenesis™ Wipes

## 100% polyester microfiber yarn knitted into a thermally bonded polypropylene substrate

### Product information

**MicroGenesis™** delivers the maximum amount of microfiber to pick up and retain particles, dust and other contaminants in cleanrooms. For dry applications where particle pickup and retention is critical, MicroGenesis delivers unprecedented performance.

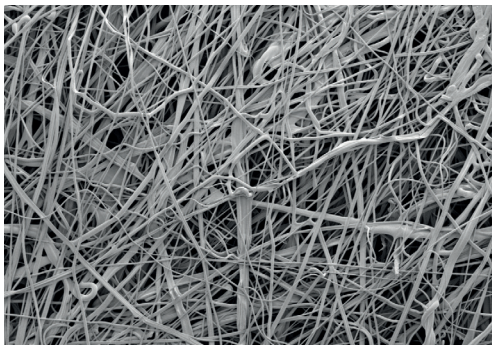
Contec's unique processing gives the MicroGenesis wipe excellent sorbency characteristics making it ideal for wiping to dry and disinfectant application. It is safe for use with all disinfectants including chlorine and quaternary ammonium-based products.

Part No.	Description	Size	Packaging
LWMM0100	MicroGenesis Wipes Bulk	10" x 12" (250 x 305 mm)	100/bag; 8 bags/case
LWMM0300	MicroGenesis Wipes Bulk	10" x 18" (250 x 460 mm)	100/bag; 4 bags/case

- Recommended for ISO Class 6-8 environments
- Microfiber fabric easily picks up and retains particles
- Ideal for picking up the powder residue or grease removal before manufacturing batches



Nonwoven polyester



Meltblown polypropylene



Hydroentangled polyester/cellulose

## Contec® Nonwoven Wipes

**Nonwoven wipes** are used for a wide range of applications in controlled environments including cleaning, application of disinfectants, removal of residues, spill control, transfer disinfection, and general-purpose wiping. Nonwoven wipes offer a variety of performance characteristics and excellent value.

Each type of fiber has a particular strength that makes it suitable for a different critical environment application. Polyester provides durability, chemical compatibility, and cleanliness. Cellulose and rayon provide excellent sorbency. Polypropylene provides exceptional cleanliness and uniform application of fluids.

Most high-quality nonwovens are made with a spunlaced process which hydroentangles the two fibers using high pressure jets of filtered water and cleans the fabric during the manufacturing process. No binders or additives are used resulting in a fabric which is low in fibers and residues. Another method of creating a nonwoven wipe is thermal bonding. This process is used for the polypropylene wipes.

Nonwoven wipes are also available with 100% polyester. These wipes have low levels of fibers and particles and are cost effective when compared to full synthetics.

### Hydroentangled 100% polyester

**Amplitude™ Delta™** 100% nonwoven polyester wipes with no binders or additives. Cost-effective polyester wipe with excellent cleanliness and sorbency with solvents. Very soft wipe with both wet and dry strength.

### Hydroentangled polyester/cellulose

**Amplitude™ EcoCloth™, Amplitude™ Epsilon™, Amplitude™ Prozorb®, Amplitude™ Sigma™, Amplitude™ Theta™, SterileSorb™** Hydroentangled polyester/cellulose wipes which are extremely sorbent with good wet strength. Excellent general purpose wipes.

### Hydroentangled polyester/Lyocell

**Amplitude™ Kappa™** A manufactured form of cellulose, Lyocell is very strong and sorbent. Sontara hydroentangled polyester/Lyocell wipes have been processed in such a way as to minimize endotoxin contamination.

### Thermally laminated polypropylene/cellulose

**Amplitude™ Zeta™** Where increased sorption is required, this 5-ply quilted wipe is highly sorptive. Inner cores of cellulose between layers of polypropylene allows fluids to be absorbed and "locked" into the pockets created by the quilting process.

"Contec offers a wide range of sterile and nonsterile nonwoven wipes"



# Amplitude™ Kappa™ Wipes

## Polyester/Lyocell nonwoven wipes

### Product information



**Amplitude™ Kappa™** feature a fine aperture and has low fibers and particles making them ideal for wiping delicate surfaces and components. A special hydroentangling process washes the Amplitude™ Kappa™ fabric, made of 58% polyester and 42% Lyocell (high quality rayon), to provide higher levels of cleanliness, sorbency and softness compared to similar nonwoven wipes.

Amplitude Kappa wipes are highly sorbent with both water and solvents and have low levels of particles and fibers. Ideal for wiping delicate surfaces such as optics, plastic and sensitive components or polishing metal surfaces.

**Amplitude™ Kappa™ Sterile LE Wipes** are made with Sontara® Lyocell/polyester blend fabric. These low endotoxin wipes have excellent sorbency and are validated sterile. Amplitude Kappa Sterile LE wipes are lot tested and low endotoxin certified to <20 EU/wipe.

The packaging allows for easy opening even when wearing gloves and the small quantities per bag minimize the possibility of any wastage. These wipes are ideal when increased sorbency is needed or a textured surface is required for efficient cleaning and particle removal. The wipes are also highly suitable for spill control and wiping-to-dry.

- Recommended for ISO Class 5-8 environments
- Hydroentangled process provides a soft texture for sensitive applications
- Ideal for delicate surfaces and as a low endotoxin option

Part No.	Description		Size	Packaging
AML0003	Amplitude Kappa Wipes Flat stacked		9" x 9" (230 x 230 mm)	250/bag; 12 bags/case
NWPZ0001	Amplitude Sterile Kappa LE Wipes Flat stacked		9" x 9" (230 x 230 mm)	25/bag; 40 bags/case
NWPZ0002	Amplitude Sterile Kappa LE Wipes Flat stacked		12" x 12" (305 x 305 mm)	25/bag; 40 bags/case

# Amplitude™ Delta™ Wipes

## 100% nonwoven polyester wipes

### Product information

**Amplitude™ Delta™** is a cost-effective polyester wipe which is very low in both particles and extractables. This wipe is made of 100% nonwoven polyester manufactured using a hydroentangling process with no binders or additives

Its open fiber structure makes it highly sorbent. It is a very soft wipe with both good wet and dry strength.

The 100% polyester is compatible with a wide range of solvents and disinfectants.

- Recommended for ISO Class 5-8 environments
- Highly durable with good wet and dry strength
- Ideal for use with disinfectants including hypochlorites

Part No.	Description	Size	Packaging
AMDE0003	Amplitude Delta Wipes Flat stacked	4" x 4" (102 x 102 mm)	1,200/bag; 12 bags/case
AMDE0004	Amplitude Delta Wipes Flat stacked	6" x 6" (152 x 152 mm)	300/bag; 15 bags/case
AMDE0001	Amplitude Delta Wipes Flat stacked	9" x 9" (230 x 230 mm)	300/bag; 12 bags/case
AMDE0002	Amplitude Delta Wipes Flat stacked	12" x 12" (305 x 305 mm)	150/bag; 16 bags/case





# Amplitude™ Sigma™ Wipes

## Cellulose/polyester nonwoven wipes

### Product information

**Amplitude™ Sigma™** is highly sorbent, has excellent durability and good cleanliness. It is a hydroentangled blend of 55% cellulose and 45% polyester. Amplitude Sigma is strong and durable wet or dry making it excellent for use in general cleaning and spill pick up.

**SterileSorb™ Wipes** are sterilized via gamma irradiation, and a certificate of sterility is provided with each shipment. These wipes are packaged in linear tear inner and outer bags for ease of opening, even with gloved hands. Embossed lot numbers on both inner and outer bags ensure lot traceability.

Part No.	Description		Size	Packaging
AMSI0001	Amplitude Sigma Wipes Flat stacked		9" x 9" (230 x 230 mm)	300/bag; 12 bags/case
AMSI0002	Amplitude Sigma Wipes Flat stacked		12" x 12" (305 x 305 mm)	150/bag; 18 bags/case
AMSI0003	Amplitude Sigma Wipes Flat stacked		18" x 18" (460 x 460 mm)	75/bag; 10 bags/case
C2-99IR/25	SterileSorb Wipes Flat stacked	 Sterile	9" x 9" (230 x 230 mm)	25/bag; 60 bags/case
C2-1212IR	SterileSorb Wipes Flat stacked	 Sterile	12" x 12" (305 x 305 mm)	25/bag; 42 bags/case

- Recommended for ISO Class 5-8 environments
- Hydroentangled fabric provides low levels of particles and extractables
- Ideal for wiping and absorbing spills

# Amplitude™ Epsilon™ Wipes

## Blue cellulose/polyester nonwoven wipes

### Product information

**Amplitude™ Epsilon™** is made of a special grade blue cellulose and polyester hydroentangled to form a wipe with improved cleanliness and excellent sorbency.

The cellulose uses a dye fast color, to minimize color bleeding. The blue color allows for differentiation in critical areas. Amplitude Epsilon is good for wet areas requiring spill pick up and clean up.

Part No.	Description		Size	Packaging
AMEP0001	Amplitude Epsilon Wipes Flat stacked		9" x 9" (230 x 230 mm)	300/bag; 12 bags/case
AMEP0002	Amplitude Epsilon Wipes Flat stacked		12" x 12" (305 x 305 mm)	150/bag; 20 bags/case

- Recommended for ISO Class 5-8 environments
- Dye-fast blue color allows for differentiation between wipes used in different areas

# Amplitude™ EcoCloth™ Wipes

Cellulose/polyester nonwoven wipes with additional loft

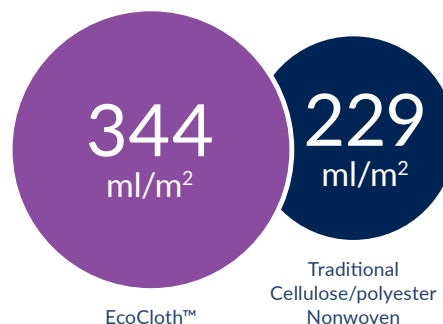
## Product information

The **Amplitude™ EcoCloth™** wipe is lightweight but has excellent sorbency which exceeds comparable standard cellulose/polyester wipes. It has been engineered to provide greater thickness in a lighter weight material. Amplitude™ EcoCloth™ is a hydroentangled cellulose/polyester fabric with additional loft.

The increased thickness greatly enhances the sorbent capacity and also makes it easier for operators to pick up one wipe at a time.

Amplitude EcoCloth is a cost-effective solution for general purpose applications such as product transfer, wiping-to-dry and absorbing spills. Where customers are looking for ways to reduce their solid waste disposal for either financial or environmental reasons, the combined effect of superior performance and lighter weight gives a potential reduction in solid waste in excess of 40% compared to standard cellulose/polyester wipes. However, due to additional loft in the fabric, this wipe has greater sorbency in terms of weight to capacity. This makes Amplitude EcoCloth a very environmentally friendly choice.

- Recommended for ISO Class 5-8 environments
- Low basis weight cellulose/polyester wipe with additional loft for greater sorbency
- Most sorbent of all cellulose/polyester wipes
- Ideal for customers wanting to reduce their solid waste



Part No.	Description	Size	Packaging
AMEC0001	Amplitude EcoCloth Wipes Flat stacked	4" x 4" (102 x 102 mm)	1,200/bag; 12 bags/case
AMEC0002	Amplitude EcoCloth Wipes Flat stacked	6" x 6" (152 x 152 mm)	300/bag; 20 bags/case
AMEC0003	Amplitude EcoCloth Wipes Flat stacked	9" x 9" (230 x 230 mm)	300/bag; 12 bags/case
AMEC0004	Amplitude EcoCloth Wipes Flat stacked	12" x 12" (305 x 305 mm)	150/bag; 14 bags/case
AMEC0005	Amplitude EcoCloth Wipes Flat stacked	18" x 18" (460 x 460 mm)	75/bag; 10 bags/case

# Amplitude™ Prozorb® Wipes

## Textured cellulose/polyester nonwoven wipes

### Product information

**Amplitude™ Prozorb® Wipes** have a durable textured surface that promotes cleaning and particle removal. They are a hydroentangled blend of cellulose and polyester, produced through a special process that creates apertures in the fabric while enhancing the thickness and providing excellent cleanliness. The resulting wipe has a durable textured surface that promotes its cleaning and particle removal capability.

This unique manufacturing process also gives this wipe excellent sorbency, it probably has the greatest level of intrinsic sorbency and quickest rate of sorbency of any similar weight nonwoven wipe. This coupled with the low level of particles and extractables make this wipe ideal for spill clean-up in critical environments, biofilm and residue removal, product wipe down prior to cleanroom entry and wiping-to-dry.

Part No.	Description	Size	Packaging
PZ-99	Amplitude Prozorb Wipes Flat stacked	9" x 9" (230 x 230 mm)	200/bag; 12 bags/case
PZ-1212	Amplitude Prozorb Wipes Flat stacked	12" x 12" (305 x 305 mm)	100/bag; 18 bags/case

- Recommended for ISO Class 5-8 environments
- Textured surface promotes effective cleaning and particle removal
- Ideal for particle removal

# Amplitude™ Theta™ Wipes

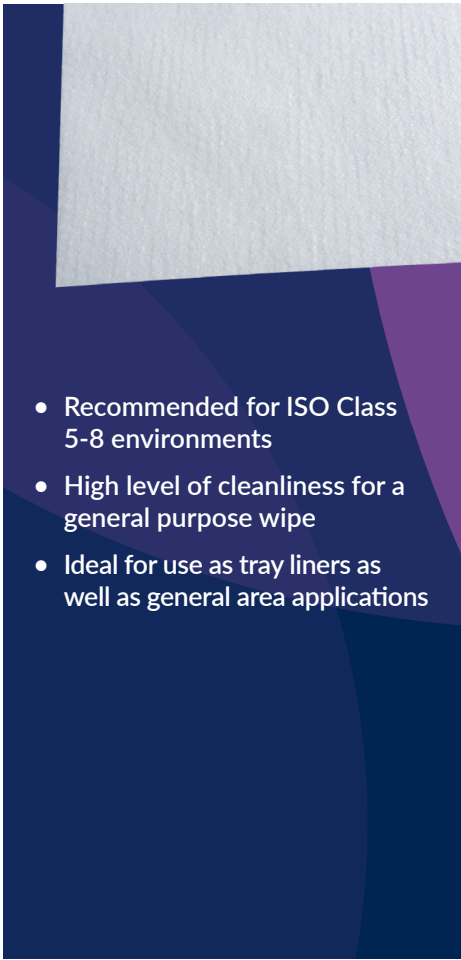
## Cellulose/polyester nonwoven wipes

### Product information

**Amplitude™ Theta™** is made from a lightweight hydroentangled cellulose/polyester which creates an economical sorbent wipe ideal for general cleaning applications. It has excellent durability and sorbency. Designed for nonabrasive applications, such as general-purpose wiping and polishing of surfaces.

Part No.	Description	Size	Packaging
AMTH0001	Amplitude Theta Wipes Flat stacked	9" x 9" (230 x 230 mm)	300/bag; 12 bags/case
AMTH0002	Amplitude Theta Wipes Flat stacked	12" x 12" (305 x 305 mm)	150/bag; 22 bags/case

- Recommended for ISO Class 5-8 environments
- Economical and cost-effective nonwoven wipe
- Ideal for general cleaning applications



- Recommended for ISO Class 5-8 environments
- High level of cleanliness for a general purpose wipe
- Ideal for use as tray liners as well as general area applications

# Amplitude™ Zeta™ Wipes

Thermally bonded polypropylene and cellulose quilted nonwoven wipes

### Product information

**Amplitude™ Zeta™ Wipes** multi-layer construction provide good chemical compatibility and sorbency. They are made from a 5-ply thermally bonded substrate which comprises of 2 layers of cellulose sealed between layers of meltblown polypropylene. This creates a material which is very sorbent and has a high level of cleanliness.

The wipes have good chemical compatibility and are resistant to most disinfectants and solvents, including acids. Sorbent enough for solvent and acid spills, they are also ideal for wiping to dry applications.

Part No.	Description	Size	Packaging
AMZE0001	Amplitude Zeta Wipes Flat stacked	8" x 9" (203 x 230 mm)	150/bag; 12 bags/case
AMZE0002	Amplitude Zeta Wipes Flat stacked	11" x 12" (280 x 305 mm)	75/bag; 20 bags/case

# TuffStuff™ Wipes

## Critical task wipes

### Product information

**TuffStuff™ Wipes** are high quality critical task wipes and are ideal for cleaning equipment and production line maintenance. They are manufactured from hydroentangled cellulose/polyester and contain no binders or adhesives. Available in light, medium and heavy-duty versions, these wipes are solvent resistant and maintain their strength even when wet.

The wipes are creped to provide a soft feel. TuffStuff wipes offer exceptional durability and cleanliness.

TuffStuff Wipes are available in multiple sizes, weights, and packaging configurations to meet the various customer needs.

- Recommended for ISO Class 6-8 environments
- Light, medium and heavy-duty wipes available
- Ideal for cleaning lower grade cleanrooms and outer areas

Part No.	Description	Size	Packaging
C1C1217Q	TuffStuff Heavy Duty Wipes Quarter folded	12" x 17" (305 x 432 mm)	500/bag; 2 bags/case
TSWC0917	TuffStuff Heavy Duty Wipes Pop-up dispenser box	9" x 16.5" (230 x 419 mm)	100/box; 8 boxes/case
TSWC1217	TuffStuff Heavy Duty Wipes Pop-up dispenser box	12" x 16.5" (305 x 419 mm)	125/box; 2 boxes/case
TSWC1214	TuffStuff Heavy Duty Wipes Roll in a dispenser box	12" x 13" (305 x 330 mm)	500/roll; 1 roll/case
TSWL1213	TuffStuff Medium Duty Wipes Quarter folded	12" x 13" (305 x 330 mm)	50/bag; 18 bags/case
TSWS1213	TuffStuff Light Duty Wipes Quarter folded	12" x 13" (305 x 330 mm)	100/bag; 10 bags/case



## Polynit-Z Wipes

### Knitted polyester electrostatic dissipative wipe

#### Product information

**Polynit-Z Wipes** are a very clean static dissipative wipe that is well suited for applications sensitive to electrostatic discharge. They are constructed using conductive yarns within the polyester interlock knit that features an unidirectional conductive pattern.

The average surface resistivity is  $3.5 \times 10^{10}$  ohms/sq. Polynit-Z wipes are laundered and packaged in an ISO cleanroom environment.

The laser-cut edges seal fibers at the wipe's edge. The wipes are ideal for cleaning the interior surface of process tools and other equipment.

Part No.	Description	Size	Packaging
LWZS0001	Polynit-Z Wipes Flat stacked	9" x 9" (230 x 230 mm)	75/bag; 16 bags/case



## StatZorb™ Wipes

### Knitted polyester electrostatic dissipative wipe

#### Product information

The **StatZorb™ Wipe** is made from polyester fabric with a conductive fiber knitted in a specially designed grid pattern that minimizes hot spots. The antistatic properties are uniform on both sides of the wipe. The surface resistivity is  $43 \times 10^7$  ohms/sq. and the static decay time is less than 1.5 seconds.

The wipes are laundered and packaged in an ISO cleanroom for very low levels of particles and fibers. The laser-cut edges seal particles at the wipes edge. The wipe are ideal for the dry wiping of sensitive electronic components and general cleaning in ESD sensitive areas. They are also suitable for use in disc drive or MR head manufacturing.

Part No.	Description	Size	Packaging
SZ-99	StatZorb Wipes Flat stacked	9" x 9" (230 x 230 mm)	75/bag; 24 bags/case



# Twill Jean Wipes

## Woven cotton twill wipes

### Product information

The **Twill Jean Wipe** is very sorbent and have high thermal stability for high temperature applications. It is a 100% cotton fabric, woven in a 2 x 1 twill construction.

The edges are bias cut to prevent unraveling. Excellent for spill pick up or general cleaning in lower grade areas.

Part No.	Description	Size	Packaging
TJ-99	Twill Jean Wipes Flat stacked	9" x 9" (230 x 230 mm)	300/bag; 12 bags/case
TJ-1212	Twill Jean Wipes Flat stacked	12" x 12" (305 x 305 mm)	150/bag; 10 bags/case

- Strong and sorbent
- Suitable for high temperature applications
- Ideal for general cleaning in lower grade areas

# Amplitude™ Optic Wipes

## Optical grade cellulose wipes

### Product information

**Amplitude™ Optic Wipes** are specifically designed for the delicate cleaning of optical products and microminiature electronic components. They are 100% nonwoven cellulose and consist of long staple fibers which are wet laid in a paper making process to form an extremely clean sheet.

It features very low levels of extractables and only moderate particle generation. The wipe has a nonabrasive surface texture. The wipes are both sorbent and optical grade.

These nonwoven wipes can be used as a lining for cleanroom surfaces and trays.

Part No.	Description	Size	Packaging
C6-99	Amplitude Optic Wipes Flat stacked	9" x 9" (230 x 230 mm)	500/bag; 25 bags/case
C6-1212	Amplitude Optic Wipes Flat stacked	12" x 12" (305 x 305 mm)	500/bag; 20 bags/case

- Recommended for ISO Class 6-8 environments
- Long staple fibers create a nonabrasive wipe which is also sorbent
- Ideal for optical products and microminiature electronic components



- Range of substrates and formats suitable for all areas of the cleanroom facility
- Easy-to-use, allowing rapid, effective and efficient application of the alcohol solution
- Presaturated wipes significantly reduce airborne levels of alcohol solution and improve operator safety
- Improve process control and repeatability

"Contec offers a wide range of sterile and nonsterile presaturated wipes"

## Contec® Presaturated Wipes

**Contec® Presaturated Wipes** can offer many benefits over bottled alcohol and dry wipes for cleanroom use. They reduce solvent use and increase convenience in hand wiping. Since they provide exceptional solvent control presaturated wipes are widely used by the medical device and pharmaceutical industries.

Contec supplies two ranges of presaturated wipes:

- **PROSAT®** range for higher grade cleanrooms, packaged in small quantities in resealable pouches to prevent drying out and preserve cleanliness
- **SATWIPES®** packaged in reusable canisters for use when large numbers of presaturated wipes are needed

The PROSAT pouches are available with small numbers of wipes per pouch meaning all wipes can be used in a session ensuring no waste. Wipes are available as 100% polyester knits for very low levels of fibers and particles down to cost-effective polyester/cellulose blends, so suitable for all grades of cleanroom. For product contact areas, wipes with guaranteed low levels of endotoxins are available.

Where large volumes of presaturated wipes are required, the wipes are supplied in reusable self-closing canisters in a perforated center-pull roll. Wipe substrates in the SATWIPES range include nonwoven polyester, polyester/cellulose and polyester/rayon.

Contec's presaturated wipes can be tailored to your specific requirements. Variables include fabric selection, solvent, saturation levels from 9 - 99% IPA and packaging.

### Features and benefits

#### Guaranteed saturation levels with either IPA or denatured ethanol

- Reduces airborne levels of alcohol helping to meet Health and Safety limits
- Reduces hazardous waste by up to 40%
- Reduces validation work
- Reduces costs
- Reduces inventory and storage space required
- Increases operator and environmental safety
- Increases process control and repeatability
- Increases convenience

#### Resealable pouches with small quantities of wipes

- Suitable for use in the highest grade cleanrooms with no waste

#### Wide range of substrates available

- Most cost-effective and suitable wipe can be used in each cleanroom area

#### Validated sterile options

- Meets GMP requirements for sterile products in Grade A and B zones

#### Refillable self-closing canister

- Convenient and cost-effective method of presaturated wipe presentation.

# Presaturated Wipes Options

Contec's presaturated wipes are available in a number of formats specifically designed for different areas of use within the cleanroom.

## Resealable pouches

For sterile and small-area use, presaturated wipes are available folded in resealable pouches. This makes the packaging compact for use in high grade areas where space is a constraint. Sterile products are usually packaged in small quantities of wipe per pouch so the wipes can easily be used up in one session to avoid wastage.

Alternatively for larger areas, more cost-effective resealable pouches with flat stacked wipes are available.

All PROSAT branded wipes are available in peel and reseal pouches.

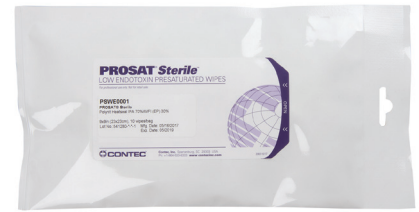
## Center-pull canisters

Originally developed as a safe and better way to handle aggressive solvents, Contec SATWIPES are presaturated wipes dispensed from a center-pull roll in a reusable canister. The easily closed canister lid helps maintain saturation levels and reduce airborne vapors.

SATWIPES® Delta™ and Sigma™ wipes are provided with a small reusable canister to reduce packaging waste and 12 refill rolls. To preserve product integrity the rolls are packaged in specially designed pouches, which are opened and loaded inside the SATWIPES canister.

## Slide 'n Seal Bags

Presaturated Polywipe-C Heatseal Wipes are available bulk packed in Contec's Slide 'n Seal Bag. This is a resealable bag that allows easy dispensing of the presaturated wipes. A tight seal is ensured every time the bag is closed without the use of any adhesives ensuring the wipes remain saturated throughout the period of use. The gusseted base means the bag will stand independently for wipes to be easily removed.



Compact PROSAT Pouches



Large PROSAT Pouches



Slide 'n Seal Bag



Center-pull container



Refillable canisters



- Recommended for ISO Class 3-8 environments
- Available sterile and with guaranteed low levels of endotoxins
- Ideal for critical areas and when a low endotoxin wipe is needed

## PROSAT® Polynit Heatseal Wipes

100% no-run interlock knit polyester wipes presaturated with 70% IPA

### Product information

**PROSAT® Polynit Heatseal Wipes** are chemically resistant 100% knitted textured polyester with laser-cut sealed edges for very low levels of particles and fibers.

The wipes are laundered and packaged in an ISO cleanroom.






The wipes are presaturated with a blend of 70% IPA and 30% deionized water. Presaturated wipes ensure consistent saturation of each wipe independent of the operator. They can increase solvent control and accountability as well as reduce VOC emissions. The wipes are packaged in convenient and easy-to-use peel and reseal pouches.

**PROSAT® Sterile™ Polynit Heatseal Wipes** are sterile by gamma irradiation, validated sterile to a  $10^{-6}$  SAL per ANSI/AAMI/ISO 11137 guidelines, so can be used in the highest-grade life science cleanrooms. Each resealable pouch contains a small number of wipes eliminating any waste at the end of a session.

**PROSAT® Sterile™ Polynit Heatseal LE Wipes** are made from the same 100% knitted polyester but presaturated with a blend of 70% IPA and 30% Water for Injection (WFI). Each lot is tested before release and low endotoxin certified to <1 EU/wipe. The low levels of endotoxins, particles and fibers make these wipes ideal for use on product contact surfaces.

PROSAT® Sterile™ Polynit Heatseal LE Wipes are either individually double or triple bagged for easy entry into the sterile suite. The pouches have been reduced in size and fitted with a hanging slot\* to be easy-to-use in mini environment.

(\* Not PSWE0002)

Part No.	Description		Size	Packaging
PS-HS9-7030	PROSAT Polynit Heatseal Wipes Presaturated with 70% IPA and 30% DI water		9" x 9" (230 x 230 mm)	30/pouch; 30 pouches/case
PSPS0047	PROSAT Polynit Heatseal Wipes Presaturated with 70% IPA and 30% DI water		12" x 12" (305 x 305 mm)	30/pouch; 20 pouches/case
PSPS0076	PROSAT Sterile Polynit Heatseal Wipes Presaturated with 70% IPA and 30% DI water	 Sterile	9" x 9" (230 x 230 mm)	20/pouch; 40 pouches/case
PSPS0091	PROSAT Sterile Polynit Heatseal Wipes Presaturated with 70% IPA and 30% DI water	 Sterile	12" x 12" (305 x 305 mm)	20/pouch; 20 pouches/case
PSWE0001	PROSAT Sterile Polynit Heatseal LE Wipes Presaturated with 70% IPA and 30% Water for Injection	 Low Endotoxin	9" x 9" (230 x 230 mm)	10/pouch; 55 pouches/case
PSWE0002	PROSAT Sterile Polynit Heatseal LE Wipes Presaturated with 70% IPA and 30% Water for Injection	 Low Endotoxin	12" x 12" (305 x 305 mm)	30/pouch; 15 pouches/case
PSWE0003	PROSAT Sterile Polynit Heatseal LE Wipes Presaturated with 70% IPA and 30% Water for Injection	 Low Endotoxin	12" x 12" (305 x 305 mm)	10/pouch; 30 pouches/case

# PROSAT® Polywipe-C Heatseal Wipes

100% interlock knit standard weight polyester presaturated with 70% IPA

## Product information

**PROSAT® Polywipe-C Heatseal Wipes** are chemically resistant and low in particles and extractable residue making it ideal for critical cleaning. These wipes are made from a standard weight 100% knitted polyester that is laser-cut to bond the fibers at the edges of the wipe. Laser cutting seals the fibers at the edge of the wipe reducing particle and fiber generation. These wipes are presaturated with 70% IPA and 30% deionized water.

The wipes are chemically resistant and low in particles and extractable residue making it ideal for critical cleaning. The wipes are laundered and packaged in an ISO cleanroom.

The nonsterile wipes are available bulk packed in Contec's Slide 'n Seal Bag. This is a resealable bag that allows easy dispensing of the presaturated wipes. A tight seal is ensured every time the bag is closed without the use of any adhesives. The gusseted base means the bag will stand independently for wipes to be easily removed. Both types of packaging ensure the wipes remain saturated throughout the period of use.

**PROSAT® Sterile™ Polywipe-C Heatseal Wipes** are gamma irradiated and validated sterile to a  $10^{-6}$  SAL per ANSI/AAMI/ISO 11137 guidelines, so can be used in the highest-grade life science cleanrooms. The sterile wipes are provided in convenient and easy-to-use peel and reseal pouches. The resealable pouches have a small number of wipes per pouch to reduce waste and control saturation volume and cleanliness.



- Recommended for ISO Class 3-8 environments
- Very low in particle and fiber generation to prevent contamination
- Ideal for wiping equipment and irregular surfaces

Part No.	Description		Size	Packaging
PSCS0009	PROSAT Sterile Polywipe-C Heatseal Wipes with Slide 'n Seal Bags Presaturated with 70% IPA and 30% DI water		9" x 9" (230 x 230 mm)	20/bag; 24 bags/case
PSCS0012	PROSAT Sterile Polywipe-C Heatseal Wipes with Slide 'n Seal Bags Presaturated with 70% IPA and 30% DI water		12" x 12" (305 x 305 mm)	20/bag; 24 bags/case
PSCS0009B	PROSAT Polywipe-C Heatseal Wipes Presaturated with 70% IPA and 30% DI water		9" x 9" (230 x 230 mm)	60/bag; 12 bags/case
PSCS0012B	PROSAT Polywipe-C Heatseal Wipes Presaturated with 70% IPA and 30% DI water		12" x 12" (305 x 305 mm)	30/bag; 12 bags/case





- Recommended for ISO Class 5-8 environments
- Hydroentangled polyester fabric is highly sorbent with good wet strength
- Ideal cost-effective polyester wipe

## PROSAT® Sterile™ Delta™ Wipes

100% nonwoven polyester wipes presaturated with 70% IPA

### Product information

PROSAT® Sterile™ Delta™ Wipes are a cost-effective polyester wipe with excellent cleanliness and wet strength. They are made from 100% nonwoven polyester fibers which are hydroentangled together using no binders or additives. The resulting fabric is extremely soft, clean and strong. The wipes are very low in particles, fibers and extractables.

The wipes can be used for many general cleaning and disinfecting applications.

The wipes are sterilized by gamma radiation and validated sterile to AAMI Guidelines so are ideal for use in higher grade pharmaceutical cleanrooms. The wipes are provided in convenient and easy-to-use peel and reseal pouches.

Part No.	Description	Size	Packaging
PS-7030IR	PROSAT Sterile Delta Wipes Presaturated with 70% IPA and 30% DI water	9" x 9" (230 x 230 mm)	20/pouch; 40 pouches/case



- Recommended for ISO Class 5-8 environments
- Durable nonwoven polyester is low in both particles and extractables
- Ideal for semiconductor facilities

## PROSAT® PS-Si Delta™ Wipes

100% nonwoven polyester wipes presaturated with 10% IPA

### Product information

PROSAT® PS-Si Delta™ Wipes are soft, durable, and low in both particles and extractables. They feature 100% nonwoven polyester presaturated with a blend of 10% IPA and 90% DI water. Designed for the semiconductor industry, the PROSAT PS-Si provides the cleanest nonwoven wipe available. The 100% nonwoven polyester fibers are hydroentangled into an extremely soft, clean, and strong fabric which is very low in both particles and extractables.

The blend of 10% IPA and 90% deionized water combines cleaning effectiveness with safety. The semiconductor grade solution is 0.2 micron filtered and meets SEMI specifications for metals.

Available in convenient, easy-to-use resealable pouches which are individually lot numbered for traceability. PROSAT PS-Si wipes are an effective, efficient, and convenient method for cleaning process tools and other equipment.

Part No.	Description	Size	Packaging
PS-Si	PROSAT PS-Si Delta Wipes Presaturated with 10% IPA and 90% DI water	9" x 9" (230 x 230 mm)	30/pouch; 50 pouches/case

## SATWIPE<sup>®</sup> Delta<sup>™</sup> Wipes

100% nonwoven polyester wipes presaturated with 70% IPA

### Product information

SATWIPE<sup>®</sup> Delta<sup>™</sup> Wipes are a cost-effective polyester wipe with excellent cleanliness and wet strength. They consist of a perforated roll of saturated wipes which are dispensed through a center-pull canister. The wipes consist of 100% nonwoven polyester fabric creating a soft, durable, and clean wipe. The wipes are very low in particles, fibers, and extractables. SATWIPE Delta Wipes can be used for many general cleaning applications.

To reduce packaging waste, each case of SAT-C3-7030 is supplied with one canister and 12 refill rolls. To preserve product integrity the rolls are packaged in specially designed pouches, which are opened and loaded inside the SATWIPE canister. Refill pouches can be purchased separately, SAT-C3-7030/18. Additional canisters can also be purchased SAT-CAN120.

Part No.	Description	Size	Packaging
SAT-C3-7030	SATWIPE Delta Wipes Presaturated with 70% IPA and 30% DI water	6" x 9" (152 x 230 mm)	100/roll; 12 rolls/case; 1 canister/case
SAT-C3-7030/18	SATWIPE Delta Wipes Presaturated with 70% IPA and 30% DI water	6" x 9" (152 x 230 mm)	100/roll; 18 rolls/case;
SAT-CAN120	SATWIPE Canister	-	10/case



- Recommended for ISO Class 5-8 environments
- Hydroentangled polyester fabric is highly sorbent with good wet strength
- Ideal cost-effective polyester wipe

## SATWIPE<sup>®</sup> Delta<sup>™</sup> Wipes

100% nonwoven polyester wipes presaturated with 99% IPA

### Product information

SATWIPE<sup>®</sup> Delta<sup>™</sup> Wipes are saturated with 99% IPA making them ideal for cleaning and residue removal in manufacturing environments. They consist of a perforated roll of saturated wipes which are dispensed through a center-pull canister. The wipes consist of 100% nonwoven polyester fabric creating a soft, durable, and clean wipe.

The use of a presaturated wipe provides a safe cleaning option when using a high concentration of solvent. Solvent use is reduced by up to 35%. To reduce packaging waste, each case is supplied with one canister and 12 refill rolls. To preserve product integrity the rolls are packaged in specially designed pouches, which are opened and loaded inside the SATWIPE canister.

Part No.	Description	Size	Packaging
SAT-C3-100	SATWIPE Delta Wipes Presaturated with 99% IPA	6" x 9" (152 x 230 mm)	100/roll; 12 rolls/case;
SAT-CAN120	SATWIPE Canister	-	10/case



- Recommended for ISO Class 5-8 environments
- Low in particles and fibers making an excellent general purpose wipes
- Ideal for cleaning and residue removal in critical manufacturing



- Recommended for ISO Class 5-8 environments
- Meltblown polypropylene fabric is exceptionally clean and free from additives
- Ideal for a variety of critical applications

# PROSAT® Meltblown Polypropylene Wipes

Presaturated with 70% IPA or 70% denatured ethanol

## Product information

**PROSAT® Meltblown Polypropylene Wipes** offer exceptional cleanliness and are suitable for use in a wide variety of critical environments. Saturated with a solution of 70% IPA or denatured ethanol with 30% deionized water, the wipes provide a uniform and consistent application of the solution to the surface.

PROSAT meltblown polypropylene wipes are exceptionally clean and also free from additives of any kind. This particular meltblown polypropylene contains very low levels of sodium and other ions. The meltblown polypropylene wipes provide a consistent release of solvent to thoroughly remove surface contaminants in critical environments.

The wipes are folded in convenient and easy-to-use peel and reseal pouches. PROSAT meltblown polypropylene wipes are ideal for wiping articles prior to pass through, cleaning process tools and other equipment, general surface cleaning and cleaning prior to decal application. The solvent blend meets either SEMI specifications for metals and contaminants, ensuring the wipes are suitable for use in microelectronic facilities or life science cleanrooms.

Contec's **PROSAT® Sterile™ Polypropylene Wipes** are available sterile by gamma irradiation validated sterile to a  $10^{-6}$  SAL per ANSI/AAMI/ISO 11137 guidelines, so can be used in the highest-grade life science cleanrooms. The sterile pouches have a smaller number of wipes per pouch to ensure all wipes can be used up in one session.

Contec's **PROSAT® Sterile™ Meltblown Polypropylene LE wipes** are also presaturated with 70% USP grade IPA and 30% deionized water but have a guaranteed low endotoxin level. Each lot is tested before release and low endotoxin certified to <20 EU/wipe, eliminating the risk of introducing endotoxins and other contaminants into product contact areas.

Part No.	Description		Size	Packaging
PS-850	PROSAT Meltblown Polypropylene Wipes Presaturated with 70% IPA and 30% DI water		8" x 8" (203 x 203 mm)	50/pouch; 50 pouches/case
PS-911	PROSAT Meltblown Polypropylene Wipes Presaturated with 70% IPA and 30% DI water		9" x 11" (230 x 280 mm)	30/pouch; 50 pouches/case
PSPP0043	PROSAT Meltblown Polypropylene Wipes Presaturated with 70% IPA and 30% DI water		9" x 11" (230 x 280 mm)	50/pouch; 40 pouches/case
PS-911ETOH	PROSAT Meltblown Polypropylene Wipes Presaturated with 70% DE and 30% DI water		9" x 11" (230 x 280 mm)	30/pouch; 50 pouches/case
PS-840IR	PROSAT Sterile Meltblown Polypropylene Wipes Presaturated with 70% IPA and 30% DI water		8" x 8" (200 x 200 mm)	40/pouch; 24 pouches/case
PS-911EB	PROSAT Sterile Meltblown Polypropylene Wipes Presaturated with 70% IPA and 30% DI water		9" x 11" (230 x 280 mm)	30/pouch; 48 pouches/case
PSPP0039	PROSAT Sterile Meltblown Polypropylene Wipes Presaturated with 70% IPA and 30% DI water		9" x 11" (230 x 280 mm)	50/pouch; 24 pouches/case
PS-911EB/ETOH	PROSAT Sterile Meltblown Polypropylene Wipes Presaturated with 70% DE and 30% DI water		9" x 11" (230 x 280 mm)	30/pouch; 48 pouches/case
PS-911LE	PROSAT Sterile Meltblown Polypropylene LE Wipes Presaturated with 70% IPA and 30% DI water		9" x 11" (230 x 280 mm)	30/pouch; 36 pouches/case

# PROSAT® PS-919

## Meltblown Polypropylene Wipes


Presaturated with 91% IPA and 9% deionized water

### Product information

**PROSAT® PS-919 Meltblown Polypropylene Wipes** are presaturated with a blend of 91% IPA and 9% DI water and are an excellent choice for general surface cleaning where fast drying times are desired. Manufactured from meltblown polypropylene these PROSAT wipes offer exceptional cleanliness. They are low in nonvolatile residues as well as particles and fibers.

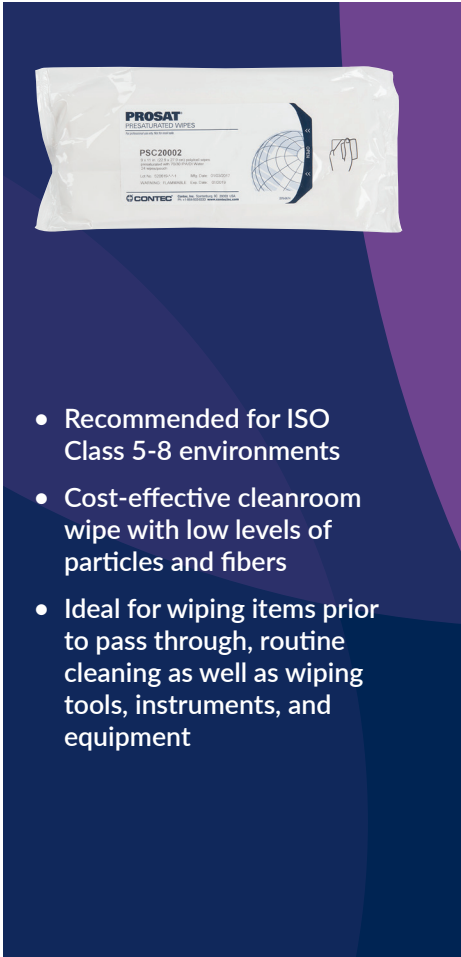
Available in convenient, easy-to-use resealable pouches which are individually lot numbered for traceability. These specially designed pouches preserve cleanliness and solvent saturation levels. The use of presaturated wipes reduces VOC emissions and solvent use up to 35% compared to spraying.

PROSAT wipes are an effective, efficient and convenient method of cleaning process tools and other equipment.



- Recommended for ISO Class 5-8 environments
- Meltblown polypropylene fabric is exceptionally clean and free from additives
- Ideal when fast drying times are desired

Part No.	Description	Size	Packaging
PS-919	PROSAT Meltblown Polypropylene Wipes Presaturated with 91% IPA and 9% DI water	9" x 11" (230 x 280 mm)	30/pouch; 50 pouches/case



- Recommended for ISO Class 5-8 environments
- Cost-effective cleanroom wipe with low levels of particles and fibers
- Ideal for wiping items prior to pass through, routine cleaning as well as wiping tools, instruments, and equipment

# PROSAT® Sigma™ Wipes

Cellulose/polyester nonwoven wipes presaturated with 70% IPA


## Product information

PROSAT® Sigma™ Wipes are low in particles and fibers making an excellent general-purpose wipe. They are manufactured from hydroentangled cellulose/polyester and saturated with 70% IPA and deionized water.

Cellulose/polyester wipes are a cost-effective cleanroom wipe. Highly sorbent with good wet strength, the wipes can be used for many general cleaning applications.

The wipes are provided in convenient and easy-to-use peel and reseal pouches. The resealable pouches preserve solvent saturation and cleanliness.

PROSAT® Sterile™ Sigma™ Wipes are gamma irradiated and validated sterile to a 10<sup>-6</sup> SAL per ANSI/AAMI/ISO 11137 guidelines, so can be used in all grades of life science cleanroom. The sterile pouches have a small number of wipes per pouch to ensure all wipes can be used up in one session.

Part No.	Description	Size	Packaging
PSC20002	PROSAT Sigma Wipes Presaturated with 70% IPA and 30% DI water	9" x 11" (230 x 280 mm)	24/pouch; 50 pouches/case
PSC20001	PROSAT Sterile Sigma Wipes Presaturated with 70% IPA and 30% DI water	 9" x 11" (230 x 280 mm)	24/pouch; 48 pouches/case



## SATWIPES® Sigma™ Wipes

Cellulose/polyester nonwoven wipes presaturated with 70% IPA

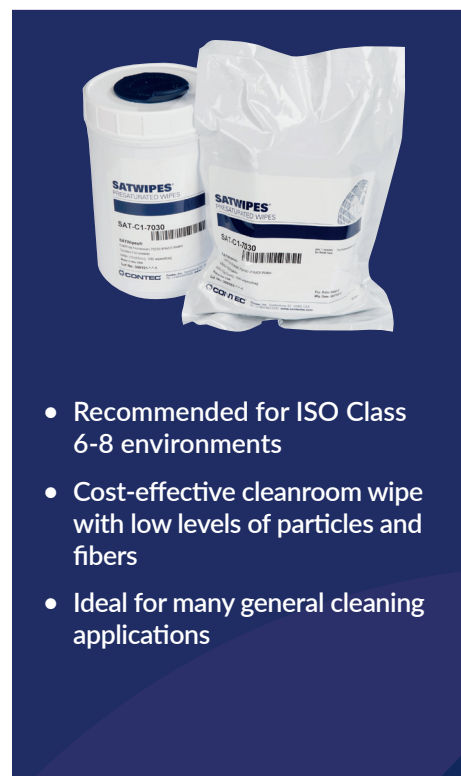
### Product information

**SATWIPES® Sigma™** Wipes are highly sorbent with good wet strength. They consist of a perforated roll of saturated wipes which are dispensed through a center-pull canister. SATWIPES Sigma wipes are manufactured from hydroentangled cellulose/polyester and saturated with 70% IPA and deionized water.

Cellulose/polyester wipes are a cost-effective cleanroom wipe, with low levels of particles and fibers. Highly sorbent with good wet strength.

To reduce packaging waste, each case is supplied with one canister and 12 refill rolls. To preserve product integrity the rolls are packaged in specially designed pouches, which are opened and loaded inside the SATWIPES canister. Refill pouches can be purchased separately, SAT-C1-7030/18. Additional canisters can also be purchased SAT-CAN120.

Part No.	Description	Size	Packaging
SAT-C1-7030	SATWIPES Sigma Wipes Presaturated with 70% IPA and 30% DI water	6" x 9" (150 x 230 mm)	100/roll; 12 rolls/case
SAT-C1-7030/18	SATWIPES Sigma Wipes Presaturated with 70% IPA and 30% DI water	6" x 9" (150 x 230 mm)	100/roll; 18 rolls/case;
SAT-CAN120	SATWIPES Canister	-	10/case



- Recommended for ISO Class 6-8 environments
- Cost-effective cleanroom wipe with low levels of particles and fibers
- Ideal for many general cleaning applications

## SATWIPES® Sigma™ Wipes

Cellulose/polyester wipes presaturated with 99% IPA

### Product information

**SATWIPES® Sigma™** Wipes are a cost-effective cleanroom wipe, with low levels of particles and fibers. They consist of a perforated roll of saturated wipes which are dispensed through a center-pull canister. Presaturated with 99% IPA the wipes are ideal for cleaning and residue removal in critical manufacturing. The wipes are manufactured from hydroentangled cellulose/polyester and are highly sorbent with good wet strength.

The use of a presaturated wipe provides a safe cleaning option when using a high concentration of solvent. Solvent use is reduced by up to 35%. To reduce packaging waste, each case is supplied with one canister and 12 refill rolls. To preserve product integrity the rolls are packaged in specially designed pouches, which are opened and loaded inside the SATWIPES canister.

Part No.	Description	Size	Packaging
SAT-C1-100	SATWIPES Sigma Wipes Presaturated with 99% IPA	6" x 9" (150 x 230 mm)	100 roll; 12 rolls/case;
SAT-CAN120	SATWIPES Canister	-	10/case



- Recommended for ISO Class 6-8 environments
- Cost-effective cleanroom wipe with low levels of particles and fibers
- Ideal for manufacturing lines in less critical cleanrooms



- Recommended for ISO Class 5-8 environments
- Lightweight nonwoven material which is low in particles and fibers making an excellent general purpose wipes
- Highly sorbent with good wet strength
- Ideal for wiping articles prior to pass through, routine cleaning and wipe down of lab tools, instruments and other equipment

# PROSAT® Theta™ Wipes


Cellulose/polyester nonwoven wipes presaturated with 70% IPA

### Product information

PROSAT® Theta™ Wipes are lightweight with good wet strength making them ideal for life science applications. They consist of cellulose/polyester hydroentangled wipes saturated with a solution of 70% IPA and 30% deionized water.

Cellulose/polyester wipes are a cost-effective cleanroom wipe, with low levels of particles and fibers. These wipes can be used for many general cleaning applications.

PROSAT® Sterile™ Theta™ Wipes are gamma irradiated and validated sterile to a 10<sup>-6</sup> SAL per ANSI/AAMI/ISO 11137 guidelines, so can be used in all grades of life science cleanroom.

Part No.	Description		Size	Packaging
PSC20006	PROSAT Theta Wipes Presaturated with 70% IPA and 30% DI water		9" x 11" (230 x 280 mm)	50/pouch; 28 pouches/case
PSC20005	PROSAT Sterile Theta Wipes Presaturated with 70% IPA and 30% DI water		9" x 11" (230 x 280 mm)	50/pouch; 28 pouches/case

# PROSAT® Pi Wipes

## Polyester/nylon split microfiber wipes presaturated with 70% IPA

### Product information

**PROSAT® Pi Wipes** are designed to help life science manufacturers control contamination and ultimately maintain cGMP compliance while consuming less resources. The wipes are made from polyester and nylon split microfiber, enhancing their cleaning effectiveness and contaminant pick-up ability. The 80 gsm microfiber fabric is highly sorbent and offers metered release of solvent to surfaces, covering greater areas compared to other presaturated wipes.

PROSAT Pi wipes are presaturated with 70% USP grade isopropyl alcohol and 30% DI water, allowing for controlled application to surfaces and less VOCs compared to spraying. The peel-and-reseal pouch can be resealed throughout use to maintain the wipes' saturation level and IPA concentration.

PROSAT Pi wipes are ideal for pharmaceutical, biotechnology and medical device manufacturers.



- Recommended for ISO Class 5-8 environments
- Split microfiber increases cleaning effectiveness and contaminant pick up with an even laydown of solvent to surface
- Ideal for greater surface coverage on equipment and materials

Part No.	Description	Size	Packaging
PS-314	PROSAT Pi Microfiber Wipes Presaturated with 70% IPA and 30% DI water	9" x 9" (230 x 230 mm)	20/pouch; 40 pouches/case
PS-314IR	PROSAT <i>Sterile</i> Pi Microfiber Wipes Presaturated with 70% IPA and 30% DI water	9" x 9" (230 x 230 mm)	20/pouch; 40 pouches/case



# Contec® Knitted Wipe Comparison Guide

Product Lines		Substrate	Dry	Presat Pouch	Presat Canister	Sterile Option	Low Endotoxin	Edge Type	Weight g/m <sup>2</sup>	Area of Use	Area of Use (GMP)	Extrinsic sorbency ml/m <sup>2</sup>	Particles > 0.5 µm x 10 <sup>3</sup> /m <sup>2</sup>	Fibers > 100 µm x 10 <sup>3</sup> /m <sup>2</sup>
Knitted Polyester	Quilttec® I	2-ply 100% polyester interlock knit	Yes			Yes		Sealed	240	ISO 3-8	A - D	581	5.70	0.14
	Anticon® Gold HeavyWeight	100% no-run interlock knit polyester	Yes			Yes		Sealed	140	ISO 3-8	A - D	471	4.34	0.14
	Polynit Heatseal	100% no-run interlock knit polyester	Yes			Yes	Yes	Sealed	140	ISO 3-8	A - D	359	2.20	0.16
	PROSAT® Polynit Heatseal	100% no-run interlock knit polyester		Yes		Yes	Yes	Sealed	140	ISO 3-8	A - D	N/A	2.60	0.14
	Anticon 100® HeavyWeight	100% no-run interlock knit polyester	Yes			Yes		Knife-cut	140	ISO 5-8	A - D	455	5.69	3.15
	Polynit	100% no-run interlock knit polyester	Yes					Knife-cut	140	ISO 5-8	C - D	357	6.90	0.53
	Anticon® Gold StandardWeight	100% interlock knit polyester	Yes					Sealed	120	ISO 3-8	A - D	350	5.20	0.14
	Polywipe-C Heatseal	100% interlock knit polyester	Yes			Yes		Sealed	120	ISO 3-8	C - D	289	3.08	0.14
	PROSAT® Polywipe-C Heatseal	100% interlock knit polyester	Yes	Yes		Yes		Sealed	120	ISO 3-8	A - D	N/A	2.22	0.14
	ReFIBE™ StandardWeight Heatseal	100% interlock knit recycled polyester	Yes			Yes		Sealed	124	ISO 3-8	A - D	275	2.72	0.15
	Anticon 100® StandardWeight	100% interlock knit polyester	Yes					Knife-cut	120	ISO 5-8	C - D	339	3.97	1.56
	Polywipe-C	100% interlock knit polyester	Yes					Knife-cut	120	ISO 5-8	C - D	265	4.01	1.26
	Anticon® MicroQuilt	2-ply microfiber polyester interlock knit	Yes			Yes		Sealed	230	ISO 3-8	A - D	850	5.7	0.45
	Anticon® Gold Sorb™	100% polyester, blend of standard and microfibers	Yes			Yes		Sealed	148	ISO 3-8	A - D	500	5.0	0.16
Microfiber	MicroSilk II	75/25% blend of microfiber polyester/nylon	Yes					Sealed	235	ISO 5-8	C - D	367	36.3	0.48
Specialty	Polynit Z	ESD polyester	Yes					Sealed	140	ISO 3-8	N/A	303	2.2	1.45
	StatZorb™	ESD polyester	Yes					Sealed	135	ISO 3-8	N/A	215	33.6	5.70

Notes (knitted and nonwoven wipes comparison)

CNC - Controlled not classified environments.

All test work is carried out on the dry substrate to the requirements of IEST-RP-CC004.2 or CC004.3.

Data shown are nominal typical values and should not be used as the product specifications.

Valid product comparisons may only be obtained through side-by-side testing in the same test facility, using the same test methods and test equipment.

# Contec® Nonwoven Wipe Comparison Guide

	Amplitude™ Kappa™	Lycell/polyester	Yes		Yes	61	ISO 5-8	A - D	395	16.3	22.0
	Amplitude™ Delta™	100% nonwoven polyester	Yes			71	ISO 5-8	C - D	305	7.9	2.00
	PROSAT® Delta™	100% nonwoven polyester		Yes	Yes	67	ISO 5-8	A - D	N/A	39.3	10.4
	SATWIPES® Delta™	100% nonwoven polyester		Yes		69	ISO 6-8	C - D	N/A	16.5	1.0
	Amplitude™ Helix™	Meltblown polypropylene	Yes			68	ISO 5-8	C - D	250	25.5	0.07
	PROSAT® MBPP	Meltblown polypropylene		Yes	Yes	36	ISO 5-8	A - D	N/A	5.8	6.3
	Amplitude™ Sigma™ / SterileSorb™	Cellulose/polyester blend	Yes		Yes	68	ISO 5-8	A - D	314	32.7	22.0
	PROSAT® Sigma™	Cellulose/polyester blend		Yes	Yes	70	ISO 5-8	A - D	N/A	21.5	37.7
	SATWIPES® Sigma™	Cellulose/polyester blend		Yes		68	ISO 6-8	C - D	N/A	17.1	14.8
	Amplitude™ Epsilon™	Cellulose/polyester blend (blue)	Yes			71	ISO 5-8	C - D	291	25.2	25.0
	Amplitude™ EcoCloth™	Cellulose/polyester blend (extra loft)	Yes			56	ISO 5-8	C - D	356	30.0	29.0
	Amplitude™ Prozorb™	Cellulose/polyester blend (textured)	Yes			55	ISO 5-8	C - D	367	29.7	11.0
	Amplitude™ Theta™	Cellulose/polyester blend (lightweight)	Yes			51	ISO 5-8	C - D	N/A	32.0	22.0
	PROSAT® Theta™	Cellulose/polyester blend (lightweight)		Yes	Yes	53	ISO 5-8	A - D	N/A	18.6	21.7
	SATWIPES® Theta™	Cellulose/polyester blend (lightweight)		Yes	Yes	53	ISO 5-8	A - D	435	18.6	21.7
	Amplitude™ Zeta™	5-ply polypropylene and cellulose laminate	Yes			85	ISO 6-8	C - D	329	115	12.0
	TuffStuff™ Heavy Duty	Cellulose/polyester blend	Yes			65	ISO 6-8	C - D	500	N/A	N/A
	TuffStuff™ Medium Duty	Cellulose/polyester blend	Yes			56	ISO 6-8	CNC	288	N/A	N/A
	Twill Jean	Woven cotton	Yes			190	ISO 7-8	CNC	300	80.0	98
	Amplitude™ Optic™	Abaca cellulose	Yes			17	ISO 6-8	C - D	79	42.4	0.52
	SATWIPES® Polyester/ Rayon	50% Polyester/50% rayon blend		Yes		36	ISO 7-8	C - D	N/A	58.2	16.8
	MicroGenesis	100% microfiber polyester into polypropylene substrate	Yes			120	ISO 6-8	C - D	658	6.8	2.39
	PROSAT® Pi	Polyester and nylon split microfiber		Yes	Yes	80	ISO 5-8	A - D	N/A	11.20	11.96



# Wipe Selection Guide

						PHARMACEUTICAL/BIOTECH			
		Product Lines	Page #	Outstanding Feature or Application	ISO Class	Grade	Support areas, gowning	General wiping in primary areas, work stations & equipment	Aseptic core, fill areas, RABs, other sterile areas
Dry	Knitted Polyester	Quilttec® I	9	Sealed edge, high sorbency, very clean, durable	3-8	A-D	S	S	BETTER
		Anticon® Gold HeavyWeight/ Polynit Heatseal	10-11	Sealed edge, high sorbency, very clean. For more critical applications.	3-8	A-D	S	S	S
		Anticon 100® HeavyWeight™ / Polynit	12	Cut edge, high sorbency, very clean. General purpose wipe.	6-8	B-D	S	BEST	NR
		Anticon® Gold StandardWeight/ Polywipe-C Heatseal/ ReFIBE™ StandardWeight	13	Sealed edge, good sorbency, clean	3-8	A-D	S	S	S
		Anticon 100® StandardWeight™ / Polywipe-C	14	Cut edge, good sorbency, clean	6-8	B-D	S	S	NR
	Microfiber	Anticon® MicroQuilt	17	Sealed edge, ultra sorbent, clean. Superior residue and particle removal.	5-8	A-D	S	S	BEST
		Anticon® Gold Sorb™	18	Sealed edge, high sorbency, clean. Superior residue and particle removal.	5-8	A-D	S	S	GOOD
		Microsilkk II	19	Sealed edge, high sorbency, clean	3-8	A-D	S	S	S
		MicroGenesis™	19	Ultra sorbent, durable, excellent for powder pickup. Ideal for dry wiping larger contaminants.	7-8	C-D	S	NR	NR
	Nonwoven	Amplitude™ Kappa™	21	Balance of cleanliness and sorbency	6-8	B-D	S	S	S
		Amplitude™ Delta™	22	Balance of cleanliness and sorbency	5-8	A-D	S	S	S
		Amplitude™ Sigma™	23	High sorbency, good cleanliness, durable. Excellent general cleaning and spill pickup.	6-8	B-D	BEST	BETTER	NR
		Amplitude™ Epsilon™	23	Good sorbency, good cleanliness. Good for spill pickup and blue color allows for differentiation.	6-8	B-D	S	S	NR
		Amplitude™ EcoCloth™	24	Ultra sorbent, extra loft, cost-effective. Excellent general wipe.	6-8	B-D	BETTER	S	NR
		Amplitude™ Prozorb™	25	Ultra sorbent, textured, Ideal for biofilm and residue removal and wiping to dry.	6-8	B-D	S	S	NR
		Amplitude™ Theta™	25	Good sorbency, durable. Good for nonabrasive applications such as polishing and general wiping.	6-8	B-D	GOOD	GOOD	NR
		Amplitude™ Zeta™	26	High sorbency and cleanliness. Great for wiping solvents and acid spills.	6-8	B-D	S	S	NR
		TuffStuff™	27	Creped, exceptional durability. Ideal for cleaning equipment and product line maintenance.	7-8	C-D	S	NR	NR
	Specialty	Polynit-Z/ StatZorb™	28	Sealed edge, very clean static dissipative wipe. Ideal for dry wiping of sensitive electronic components and ESD sensitive areas	5-8	A-D	S	S	NR
Presaturated	PROSAT® Polynit Heatseal/ Polywipe-C Heatseal	32-33	Good general-purpose wipe for critical applications.	3-8	A-D	S	S	BEST	
	PROSAT® Delta™	34	Clean, consistent saturation with each wipe.	5-8	A-D	S	S	NR	
	SATWIPES® Delta™	35	Perforated roll, durable, clean.	7-8	C-D	S	NR	NR	
	PROSAT® MBPP	36-37	Clean, consistent saturation with each wipe, economical, low levels of sodium and other ions	5-8	A-D	BETTER	GOOD	BETTER	
	PROSAT® Sigma™	38	Consistent saturation with each wipe, good wet strength.	6-8	B-D	BEST	BETTER	GOOD	
	SATWIPES® Sigma™	39	Perforated roll, good wet strength, economical	7-8	C-D	GOOD	NR	NR	
	PROSAT® Theta™	40	Lightweight, good wet strength. Great for general cleaning applications.	6-8	B-D	S	S	NR	
	PROSAT® Pi	41	Great metered release of solvent to surface for even laydown.	6-8	B-D	S	BEST	NR	

S=Suitable

NR=Not Recommended

# Wipe Selection Guide

GENERAL/CNC AREAS	MEDICAL DEVICE			SEMICONDUCTOR & ELECTRONICS		
General “lint-free” wiping; furniture finishing, work station/part cleaning in clean areas, general maintenance	Support areas, gowning, general wiping in primary areas, work stations & equipment	Product contact, final cleaning before terminal sterilization	Blotters, tray liners, clean rest areas	Support areas, gowning	General wiping in primary areas, work stations & equipment, chamber cleaning	Wet benches (liquid pick-up)
NR	S	S	S	S	S	BETTER
NR	S	BEST	S	S	BETTER	S
NR	S	BETTER	S	S	NR	NR
NR	S	S	S	S	GOOD	NR
NR	S	S	S	S	NR	NR
NR	S	S	BEST	S	BEST	BEST
NR	S	S	BETTER	S	NR	GOOD
NR	S	S	S	S	S	S
GOOD	S	NR	S	NR	NR	NR
S	S	S	S	S	NR	NR
S	S	S	NR	S	NR	NR
S	BEST	GOOD	GOOD	S	NR	S
S	S	S	S	S	NR	S
S	BETTER	S	S	S	NR	S
S	S	S	S	NR	NR	S
BETTER	GOOD	S	S	S	NR	S
S	NR	NR	S	NR	NR	S
BEST	S	NR	S	NR	NR	NR
S	S	S	S	S	S	NR
NR	S	BEST	NR	S	BEST	NR
S	S	S	NR	S	S	NR
S	S	S	NR	S	NR	NR
GOOD	GOOD	S	NR	S	BETTER	NR
S	S	BETTER	NR	S	GOOD	NR
S	BETTER	S	NR	NR	NR	NR
BETTER	S	GOOD	NR	S	NR	NR
BEST	BEST	S	NR	S	NR	NR

# Testing Wipe Cleanliness

by Dave Nobile  
Contec, Inc.

## Considerations and Limitations

Users of wipes searching for alternative or new wipe options often look to manufacturers' Technical Data Sheets (TDS) to compare wipes for their critical cleaning applications. Unfortunately, while simple and relatively easy to do, this approach cannot provide accurate or valid insight to how various wipes compare to each other. When selecting or evaluating wipes for a given application, it is useful to understand how wipes are tested and evaluated.

Most recognized test laboratories that are contracted to test cleanroom wipes for cleanliness follow test methods detailed in published versions of the Institute of Environmental Sciences and Technology (IEST) Recommended Practice 4 (IEST RP-CC-004.X). A recent revision of the Recommended Practice 4 is pending approval. Once approved, the Recommended Practice will provide simplified and more specific test methods, and for the first time ever, will include guidance to end users regarding wipe selection for most critical wipe applications and uses.

While the test methods detailed in the IEST Recommended Practice are sometimes used to evaluate wipes for various cleanliness and performance characteristics (particle, residue, extractable ions, sorbency, etc.) in comparison to established specifications or requirements, they are often used to compare wipes from different manufacturers relative to a wipe currently used in a facility. Often this comparison is made in the absence of an established specification, but rather the incumbent wipe is delineated as the acceptable benchmark for wipe cleanliness and performance, against which other wipes are compared.

While there is typically a strong desire to compare wipes using manufacturers' published wipe cleanliness data, or to compare data from some previous wipe testing to more recent testing of the same or different wipes, this is plainly not possible, especially for the characteristic of particles. The particle cleanliness of all cleanroom wipes falls within a certain range for any given wipe. Indeed, the goal of wipe manufacturers is to make that range as narrow and consistent as possible through control of all the contributors to wipe quality – fabric, construction, processing, converting, laundering, and packaging. While these components are all regulated, an inherent and natural range of variation still exists to lesser or greater extent depending upon many factors, including manufacturer.

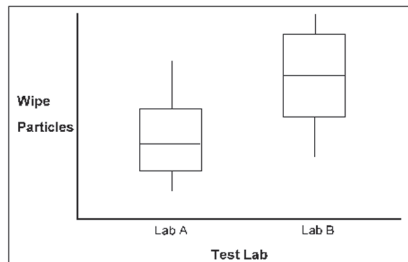


Compounded with this range of wipe variation are the very real variations and variables that exist in the testing of wipes, and specifically the sampling and enumeration of particles released from wipes. Sample preparation, equipment condition and calibration, and technician skill and diligence all affect wipe particle test results within a given test lab.

Importantly, it is the differences between test labs that provide the greatest disparities in particle data for a given cleanroom wipe. Even when two test labs are following the same published test methods, differences between labs have significant influence on the test results finally reported. These differences include, but are not limited to:

- Particle sampling equipment
- Particle enumeration equipment; brand, type, sensor, calibration, condition, etc.
- Sampling volume and rate
- Laboratory practices
- Test solutions
- Interpretation of test methods
- Specific sampling and enumeration techniques
- Data interpretation, units of measure, calculations, and reporting
- Test environment
- All of the above at a specific moment in time

The following graphic can be used to illustrate a given cleanroom wipe tested by two different test labs. The combination of wipe variation and lab variables can be represented by a common Box-and-Whisker plot for either Lab A or Lab B as shown.



These plots can be thought of as representing a given manufactured population of wipes, a very small sampling of which is tested by test Lab A and Lab B. In this illustration though, the boxes and whiskers represent the potential range of the data due to the compounded variations of wipe and test lab. In fact, unless a very large data base of a wipe characteristic is created over an extended period of time, any wipe test data represent merely a snapshot of that characteristic at the time the wipes were tested. The data as reported by either test lab may fall anywhere on these plots – the mean line (in the box), at the extremes of the boxes, or as outliers at the ends of the whiskers.

What is critical to understand is that the only practical way in which a valid and meaningful comparison of wipes can be made is through testing samples of the wipes in the same lab, using the same methods and equipment, within the shortest time frame practical, and ideally, by the same technician.

So in order to evaluate wipes relative to an incumbent wipe, all of the wipes being compared must be tested together. While it is possible to compare candidate wipes to a known wipe with a large enough database, and enough time to enable trend analyses of the known wipe, this is very rarely the situation in which wipes are considered.



Once all wipes under consideration have been tested together, ideally including the incumbent wipe, valid and meaningful comparisons can then be made to the benchmarked wipe. It is most common for wipes to have areas of strengths and weaknesses relative to other wipes (e.g. one may be lower in particles, but higher in residue relative to another wipe).

As a result, it is both important and practically useful to understand and clearly identify those wipe characteristics that are critical to the needs of the operations and applications in a given facility or process, and those characteristics that are less critical. Awareness of the critical wipe characteristics, combined with valid comparative test data will then enable selection of the wipe most likely to provide the required and desired performance for any specific application.

For more information or to purchase  
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