

Antibacterial 365 Fabric Surfaces

Technical Data Sheet

NmTM
Nanoman

THE SCIENCE of PROTECTION

1 Description

Nanoman Antibacterial 365 coating for fabric surfaces has been specifically engineered to destroy bacteria and germs on fabric surfaces providing continuous 24/7, 365 day protection preventing the spread of bacteria and germs from surface to surface and surface to host.

Unlike disinfectants that are effective at killing bacteria only once at the time of application, Nanoman Antibacterial 365 works by continually destroying bacteria and germs that are deposited on to the fabric surface. Like our long-lasting hydrophobic coatings, Nanoman Antibacterial 365 physically and molecularly bonds with the fibres of the fabric and becomes intrinsic to its make up providing the fabric with a continuous long-lasting bacteria and germ elimination barrier.

Nanoman Antibacterial 365 works completely differently to disinfectants, are toxic chemical sterilisers. Utilising advances in nanotechnology, Nanoman Antibacterial 365 coats the fibres of the fabric surface with a flexible, transparent layer of bacteria and germ destroying “nano swords”. These nano-swords draw the deposited bacteria and germs down onto the nano swords which and immediately ruptures them rendering them ineffective and unable to spread infection. The nano coating has a “kill rate” of 99.9% making it one of the most effective fabric protections coatings available.

2 Features and Benefits

- bacteria and germs, even those with layers protecting their amino acids and proteins Provides continuous 24/7, 365 day protection after a single application
- Excellent adhesion to the fibres of fabric.
- High UV and chemical resistance
- Suitable for use indoors and outdoors
- Applicable for use on all fabric surfaces cotton, wool, silk leather and synthetics.
- Economical. High coverage rate, approximately 60-80mls per square metre
- Also prevent the spread fungi
- Easy to apply.
- Cures at room temperature.
- Non toxic and VOC Free
- Invisible
- Eliminates the need to continually disinfect fabric surfaces.

3 Applications

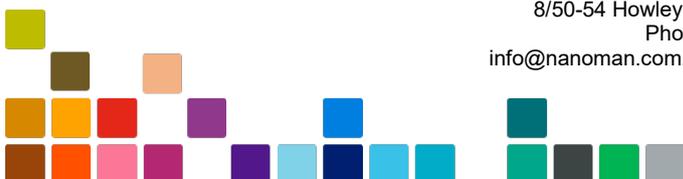
Bacteria and germs are transmitted not only through droplet spray but also via various surfaces including fabric that can convey bacteria and germs from one person to another via surfaces. . Research bacteria and germs can remain viable on surfaces for an extended period of time of several days and even and even multiply on some surfaces.

These surfaces include chairs, sofas, bedding, seating, public transport and any other public, private or workplace surface that has a high concentration of potential carriers that can touch and transmit the virus to the surface. It also includes items of clothing such as uniforms, PPE and school attire.

It can be used by any industry and on any fabric surface including:

- **Public transport** – Trains, trams, buses, taxis airplanes, terminals, transport waiting areas
- **Office / Hospitals** – Workplaces, meeting rooms, hospitals, waiting rooms, aged care facilities, clinics
- **Airports** – Terminals, airplane lounges, airport cafes
- **Education** – Schools, kindergartens, universities, community learning spaces, TAFE, places of worship, libraries
- **Industries-** Restaurants, cafes, hotels, clubs, offices, cruise liners, shopping centres, sporting facilities, casinos, cinemas, public buildings.

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- **Personal Items** – Bags, coats, clothing, bedding (including mattresses, covers, sheets, pillow cases and blankets), rugs, upholstery, towels, sports apparel, socks, car seats and seating.

4 Surface Preparation

The most important step in the application process is preparing the surface. To ensure the coating's maximum performance the fabric to be coated is clean, dry and free of any other coatings including cleaning agents prior to application.

Vacuum and clean the fabric or surface to be coated to ensure loose dirt and fibres are removed, prior to applying Nanoman Antibacterial 365. Best preparation would also include steam cleaning the fabric, but it is noted that this is not essential and not always feasible.

If applying to clothes or materials that can be machine washed it is recommended that they be rinsed with fresh water to remove any soap residues and allowed to completely dry before applying Nanoman Antibacterial 365

5 Directions for Use

Ensure surface has been prepared properly and is clean and dry.

Shake the container before use and re-shake every 15-20 minutes to ensure the nano particles are fully suspended.

Simply spray on Nanoman Antibacterial 365 from a distance of about 15cm to the fabric to fully dampen but not saturate the fabric / material. If applying to leather, use a soft clean cloth to rub in the coating and do not let it pool. When applying to seats we recommend agitating the coating in with a soft bristle brush to ensure all the fibres of material are covered.

For application on carpet we recommend a wet-on-wet application (i.e. two coating) with some gentle agitation (soft bristle brush or rubber blade) to work the coating into the carpet strands between each spray.

The surface is usually touch dry in 2 hours but be allowed to dry for 6 hours before use .

Nanoman Antibacterial 365 is available in ready to use spray bottles and is designed for use by both consumers and professional cleaners alike. You don't need to be an expert to apply the products. For large scale applications we recommend the use of HVLP spray or electrostatic spray equipment.

Specific application instructions:

- The wearing of gloves is recommended.
 - Ensure the surface is dry, clean, free of any dirt, loose fibres and has not been treated with any other coating. Remove all pre-existing coatings and marks prior to application.
 - Shake bottle prior to application.
 - Spray on evenly over the fabric at a distance of approx. 6 inches (15cm) until the entire surface is damp. If protecting leather use a soft cloth to rub in evenly. If applying to furniture or clothes brush in the coating with a soft bristle brush.
 - Let it dry/cure for 24 hours and it is ready for use.
 - Amount to be applied depends on absorbency of fabric. (Avg. 60 to 80ml M2). Apply one coat only (except if treating carpet).
- Protective coating will reach its optimal performance after the fabric has dried. Usually 12-24 hours depending upon the environment. Keep dry (if possible) during this period.
- Ensure fabric stays dry and untouched during drying time



Cautions

- Do not apply to external surfaces in rain or when rain is expected within 12-24 hours.
- DO NOT THIN. Shake contents thoroughly prior to use.
- Do not apply to hot surfaces.
- Do not use with waterproofing products.
- Apply in a dust-free environment to avoid surface contamination.
- After application do not scrub or allow spills to remain on the coated surface. Remove spills with a paper towel or damp cloth. To remove marks dab fabric with a damp cloth

Working Conditions:

- The wearing of protective gloves/protective clothing/eye protection is recommended when using this product. Final choice of personal protective equipment will depend upon individual circumstances and/or according to risk assessments undertaken.
- Consult SDS for proper handling, clean-up, disposal, and use of personal protective equipment.
- Please ensure the area being treated is well ventilated.
- Avoid breathing in spray.
- Store in a sealed container and keep away from children.
- Clean equipment immediately after using.
- Ensure any overspray be wiped off adjacent surfaces with a dry cloth as soon as possible to avoid crystallisation.

If applying commercially or to very large areas you can use an Electrostatic Sprayer for application. Please contact us for further details about this.

6 Coverage

Consumption will vary depending upon on the absorbance of the material, however expected usage is between 60 and 80ml/M²

Some highly absorbent fabric may require 100ml/M²

Carpet is usually highly absorbent and each application will usually require 60-80ml per M² so wet on wet application will require up to 160ml/M²

The durability of the coating is dependent on several factors including, the type of material or item that it is applied to, its use and the mechanical stress applied to the surface. Assuming average use and cleaning Nanoman Antibacterial 365 will provide microbial protection of fabric for 365 days

7 Cure Time

Nanoman Antibacterial 365 for fabric materials is effective after the coated surface has completely dried. This usually requires 6 – 12 hours drying time during which the surface should remain dry and unused.

8 Physical Characteristics

- Appearance: Colourless / Transparent
- Density: 0.98 g/m³ - 1.01 g/m³ (at 20° C)
- Chemical basis: Modified silicon dioxide (silan quat with adhesion promoter)
- Solvent base: Deionized water
- Flash point: N/A



9 Packaging

Nanoman Antibacterial 365 Hard Surfaces is available in consumer user sized and commercial sized containers:

- 250ml
- 750ml
- 1 Litre
- 5 Litre
- 20 Litre

10 Shelf Life and Storage

- Store in its sealed container and keep away from children.
- Unopened original containers can be stored for up to 2 years.
- Do not leave container open for extended periods
- Recommended storage and transport temperature: +5 to +25°C.
- Store out of direct sunlight and in a dry environment.

11 Safety Instructions

The instructions on the Nanoman Antibacterial 365 Safety Data Sheet must always be followed.

- The wearing of protective gloves/protective clothing/eye protection is recommended when using this product. Final choice of personal protective equipment will depend upon individual circumstances and/or according to risk assessments undertaken.
- Keep out of reach of children
- Store in closed containers
- Do not ingest or inhale fumes

Consult SDS for proper handling, clean-up, disposal, and use of personal protective equipment

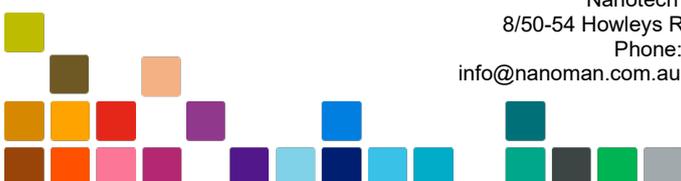
12 Surface Maintenance / Cleaning

Surfaces coated with Nanoman Antibacterial 365 do not need any special cleaning regime. For Nanoman Antibacterial 365 to be most effective, regular and customary cleaning and hygiene practices should be maintained.

Vacuuming and brushing the fabric removes dead microbes and other contaminants that can cover the “killing field” of nano swords, diminishing its ability to destroy microbes that are deposited on the treated surface.

Do not rub or scrub fabric or allow liquids spills to remain on the coated surface. Remove spills with a paper towel or damp cloth. Nanoman Anti-Microbial, will provide continuous 24/7 protection for at least 365 days. It will not simply disappear after this, however we do recommend re-applying the coating every 12 months to ensure maximum protection.

Items coated with Nanoman Antibacterial 365 that can be machine or hand can tolerate up to 10 washes before a re-application is necessary.



13 Disclaimer

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. Users should satisfy themselves that it is suitable for their needs. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. As we cannot control or anticipate the conditions under which this product may be used, each user should review the information in specific context of the planned use. To the maximum extent permitted by law, Nanotech Products Pty Ltd will not be responsible for damages of any nature resulting from the use or reliance upon the information contained in this data sheet. No express or implied warranties are given other than those implied mandatory by law.

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