

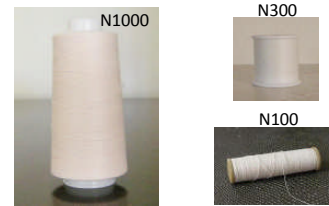
## Deodorant Thread **DEODOREY** - Bobbin Thread **PinkishWhite**

Deodorant thread **DEODOREY** is the revolutionary thread that is made from the nanotechnology-based gas-adsorbing fiber, which adsorbs and neutralizes body odor molecules in the air. **PinkishWhite** was developed as a bobbin thread for a sewing machine.

### How to apply **PinkishWhite** to products

As "**PinkishWhite**" is available for a domestic sewing machine as a bobbin thread, it is easy and convenient to add deodorizing ability to personal items at home. Furthermore, there can be various applications to craft works like knitting and quilting as well. For example, it is applicable to the socks knitted together with sock yarns, the large-sized quilts using it as a bobbin thread, and so on.

In the case of the apparel products (underwear, shirts, socks & caps) which directly touch the skin, it is effective to use it as a bobbin thread for the spots (armpit, neck, toe/sole of the foot, forehead) where strong sweat odors are produced.



**DEODOREY - Bobbin Thread PinkishWhite**

### <Specifications>

Material: Polyester 70%, Acrylate 30%  
 Composition: 20 tex / 2-ply  
 Color: Pinkish white  
 Usage: Bobbin thread for machine sewing  
 Length:  
 Type **N1000** - 1,000 meters (1,111 yards)/cone  
 Type **N300** - 300 meters (333 yards)/reel  
 Type **N100** - 100 meters (111 yards)/reel

## Features of Deodorant Thread **DEODOREY**

### [Feature 1] Deodorizing Human Body Odors

The components (urea, fatty acid, keratin, etc.) of sweat and dead skin surface are oxidized or decomposed by bacteria on the skin surface, and changed to odor components. (See Fig-1) An aromatic makes unpleasant smell less noticeable, but **DEODOREY** deodorizes them by adsorbing and neutralizing odor molecules. (See Fig-2)

(\* Components of perfume are not deodorized by **DEODOREY**.

(\* Components (Acetaldehyde, Pyridine & Hydrogen) of tobacco odor are not deodorized by **DEODOREY**.

### [Feature 2] Strong & Speedy Deodorizing Ability

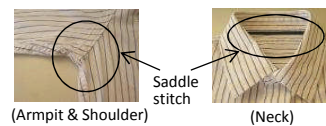
Since the surface area of **DEODOREY** is large because of its fibrous structure, it has the remarkable deodorizing ability, which is stronger 5-20 times than existing deodorizer like activated carbon, and can make sweat odors deodorized for a short time.

(\* Only 3 grams (0.1 ounce, 2ply-80 yards) of **DEODOREY** can adsorb and neutralize 98% of initial Ammonia gas 100ppm in 20 minutes. (Test report by Japan Synthetic Textile Inspection Association)

### [Feature 3] Long-life Deodorizing Ability

The deodorizing ability is not declined by washing. On the contrary, washing makes adsorbed odors released in the water and drying in the sun makes them released in the air so that the deodorizing ability can be recovered. (See Fig-2) It lasts almost indefinitely.

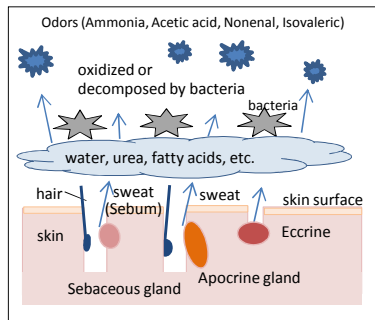
### Application examples of bobbin thread (shirt)



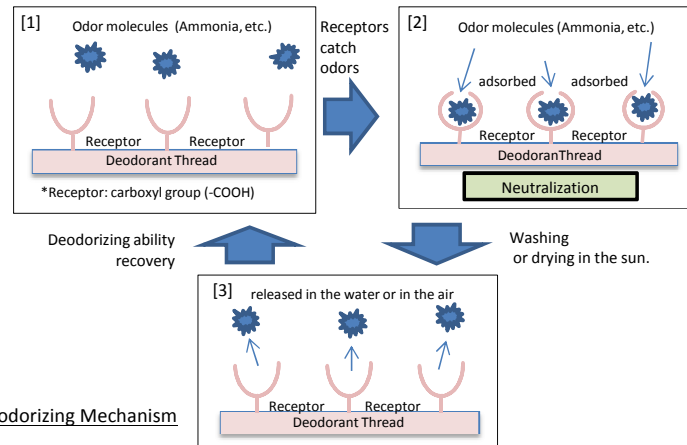
### Application to Sock Yarns



To deodorize the foot odor as well as to make the parts of heel and toe strong, it is knitted together with Sock Yarns.



[Fig-1] Body Odor Production Mechanism



[Fig-2] Deodorizing Mechanism

### Application Consideration/Precaution of Deodorant Thread **DEODOREY**

- In the case that the used length of **DEODOREY** is too short, you cannot get the expected deodorant effect. If you use 25-75m(2ply)/10cm<sup>2</sup> (28-83yards/4 inch<sup>2</sup>) of **DEODOREY** for your product, it may comply with the standards "Deodorant processed textiles certification criteria" published by Japan Textile Evaluation Technology Council. However, as this is one of the guidelines, you need to ask the designated examining organizations to verify if your product acquired expected deodorant ability or not.
- It is possible to yarn-dye and piece-dye **DEODOREY** in faint (light) colors and light deep colors. However, **DEODOREY** must be dyed under the specified conditions in order to avoid losing its deodorizing ability. If it is necessary to dye **DEODOREY** by yourself, please contact EmmaCreation in advance. Also, if you wish dyed **DEODOREY**, please send your inquiry to EmmaCreation.
- Since **DEODOREY** contains the deodorant fiber which is difficult to dye in dark (deep) colors, **DEODOREY** itself cannot be dyed in dark colors perfectly.