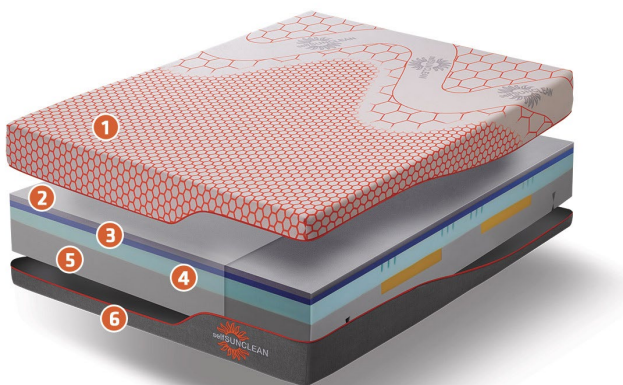
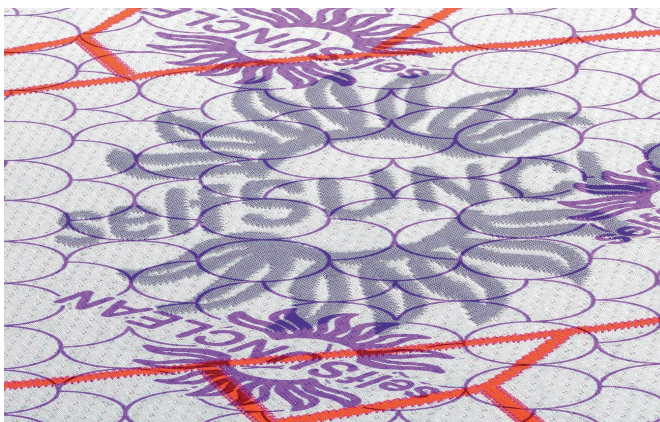
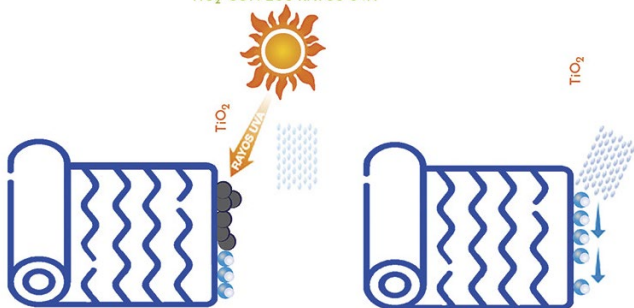




REACCIÓN DEL CATALIZADOR
TiO₂ CON LOS RAYOS UVA



SELF SUNCLEAN MATTRESS

SELF-SUNCLEAN MATTRESS WITH TECHNICAL FABRIC WITH HYGIENIC, ANTI-VIRUS AND ANTIBACTERIAL PROPERTIES, REPELS DIRT.

What is the Self SUNCLEAN fabric?

It is a fabric that provides hygienic, antimicrobial properties against Gram-positive and Gram-negative bacteria. All this thanks to its photocatalytic finish.

It is the sum of three processes of the fabric:

1. PHOTOCATALYSIS
2. ANTIBACTERIAL AND SANITIZING PROPERTIES
3. REPELS LIQUIDS AND DIRT

It is a self-cleaning fabric that breaks up contaminating particles when it comes into contact with natural or ultraviolet light.

How does the Self SUNCLEAN fabric achieve its antibacterial and sanitizing properties?

By means of the reaction of the TiO₂ induced by the action of the UV light that generates its photocatalytic activity obtaining its antibacterial function.

The SELF SUNCLEAN tissue sample has significant antibacterial treatment against bacteria such as *S. aureus* and *E. coli* as seen in the results of the sample analysed below.

The SELF SUNCLEAN tissue sample was tested for bacteria:

- *Staphylococcus aureus* ATCC 6538. Gram+ type.
- *Escherichia coli* ATCC 8739. Gram- type.

The SELF SUNCLEAN fabric sample has significant antibacterial properties, compared to the two bacteria tested.

SELF SUNCLEAN FABRIC

- Activity against *S. aureus* 2,02
- Activity against *E. coli* 2,15

From the results obtained, it is concluded that the SELF SUNCLEAN fabric sample has significant antibacterial properties, compared to the two bacteria tested.

How does our fabric manage to "stay dry"?

With the direct application of the so-called lotus effect, we obtain the superhydrophobic properties by achieving a contact angle greater than 150 degrees.

As regards the repelling of liquids, it has water repellency values of 8 (on a maximum scale of 10) and oil repellency values of 4 (for a maximum of 8).

The following table shows the results obtained for each service evaluated:

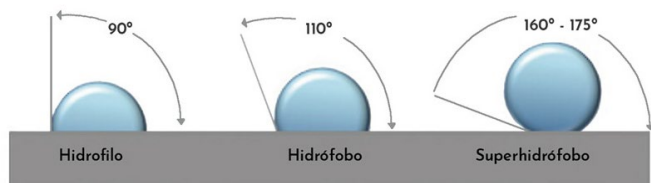
SELF SUNCLEAN FABRIC	
Water repellent level	8 (maximum 10)
Oil repellent level	4 (maximum 8)

(left) water repellency of the SELF SUNCLEAN fabric sample with the measuring liquid value 8; (right) measuring liquid value 4 in the oil repellency test.



Why do some surfaces get wet and others don't?

Because the cohesive force, which is the interaction between the molecules of the liquid, makes the drop take on a spherical shape and prevents contact with the surface, is greater than the adhesive force.



Thanks to this type of fabric, any undesirable element is prevented from penetrating the next layers of the mattress, it repels liquids and the antibacterial fabric takes effect.

How does photocatalysis work?

Photocatalysis as a decontamination process could be compared to photosynthesis, thanks to sunlight it is able to eliminate CO₂ to generate organic matter, while photocatalysis eliminates other pollutants present in the air and atmosphere through an oxidation process activated by solar radiation.

Why is the mattress cover removable?

The reason is very simple, the objective is to facilitate the cleaning of the mattress, just by exposing the cover to the ultraviolet light emitted by the sun (sunlight) just by opening the window of your room, the properties of the fabric will take effect. The UV light activates the sanitizing cleaning function.

Benefits of TiO₂ as an antibacterial compound

Titanium dioxide also has antibacterial and disinfection properties when it is presented in the form of nanoparticles. This effect is induced by the action of UV light needed to generate its photocatalytic activity. In recent times, industry has developed new ways of synthesis, which has made titanium dioxide serve as a disinfectant in the visible light region.

Our fabrics have been tested by AITEX to quantify their antibacterial quality, using the test method described in UNE-EN ISO 20743:2013. Textiles. Determination of the antibacterial property of textile products.

CERTIFICATES



IT IS RECOMMENDED TO CHANGE THE MATTRESS EVERY 8 YEARS

AT LUFTHOUS® WE ALWAYS USE THE BEST MATERIALS AND THE LATEST TECHNOLOGY.

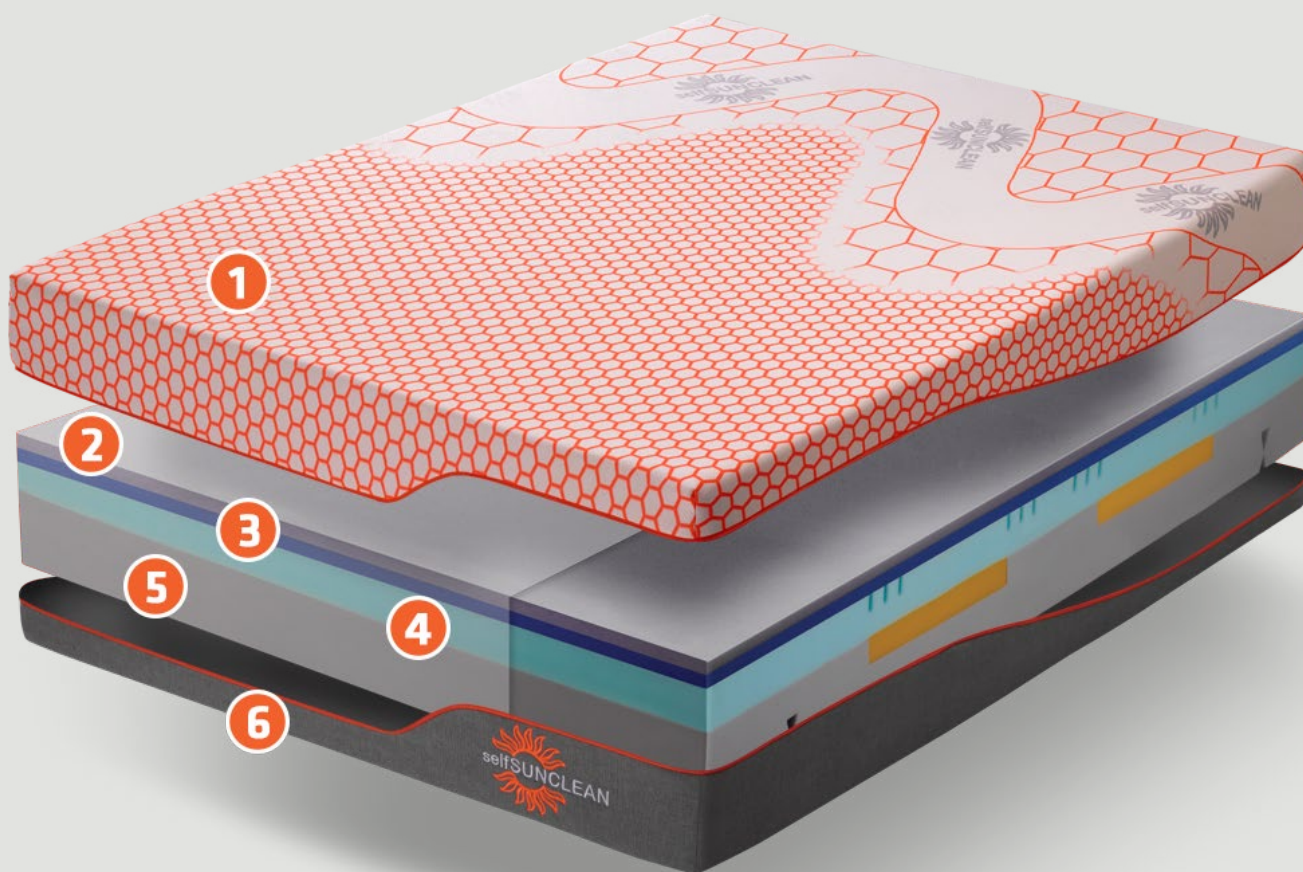
COMPOSITION

1. 500gr self SUNCLEAN fabric
2. Inner sleeve
3. ViscoGraphene
4. Enerflow (maximum absorption)
5. Specially profiled core, with different rest areas and reinforcement in the areas of greatest impact
6. Non-slip fabric



enerFLOW

S-CLEAN
SUN CLEAN SYSTEM



VIRUCIDA

lh lufthous®

C/ Margarita 34, 36 y 38
(POLIG. IND. EL LOMO)
Humanes de Madrid. 28970 MADRID
Teléfono: 902 040 252 / Fax: 91 279 15 19
902040252@lufthous.es
<http://www.lufthous.es>