

NON  
WOVENS

legiotex<sup>®</sup> 

Retains and eliminates  
the *Legionella pneumophilla*

Logrotex  
NON WOVENS



## What is Legiotex®?

**Legiotex®** is a non-woven antibacterial felt which retains and condenses aerosols that carry the *Legionella pneumophilla* bacteria, and eliminate it by contact.

The exclusive combination of antibacterial fibres of **Legiotex®** non-woven felt confers ideal porosity to retain micro-drops of water (2-5 microns) which transport the bacteria, and the specific treatment provides it with a long working life and resistance to climatic conditions.

With a spongy texture obtained through air-lay technology **Legiotex®** is born, a filter capable of minimising infection by the disease. Its ease of installation in air intakes and outlets in cooling towers, evaporation condensers and other systems prevents dispersion of contaminated micro-drops into the atmosphere.

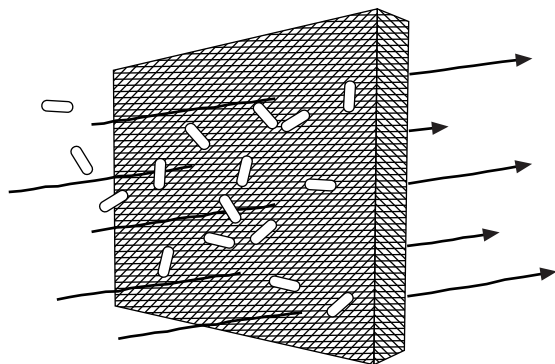


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## How does Legiotex® work?

One of the main contamination channels in cooling towers is through the air current intake. Through air intakes, dust, sediment, bacteria, protozoans and even seeds and leaves enter cooling towers. These items increase the amount of solids in suspension and contaminate the system chemically, physically and biologically, which subsequently causes an increase in water consumption and chemical treatment. The presence of leaves and seeds in the circuits cause production stoppages, high levels of consumption of chemical products and damage to the equipment. Moreover, the presence of *Legionella pneumophilla* has been detected around decomposing leaves and seeds.

On the other hand Legiotex® filters aerosols generated in air outlets of cooling systems, and because of their biocide properties the risk of infection through inhalation is neutralised.



This is fundamental in installations in areas where there is more than one cooling tower, since, in addition to providing protection against *Legionella pneumophilla* entering ambient air, it also avoids cross-contamination between towers which share the same space or contaminated towers in nearby buildings.

Conventional filter systems entail the disadvantage of the solids retained on the surface of the filter working as a substrate and feeding the bacteria. These filters quickly become clogged and their efficacy is consequently reduced. Nevertheless, Legiotex® filters prevent proliferation of bacteria and destroy it on the surface.

Their efficacy stems from the biocide added to the fibres at the time of manufacture. That is how they are resistant to washing, conferring more stable and permanent biocide properties.

The biocide is fully compatible with disinfectants permitted for use under current legislation and which are currently used to fight the bacteria.

It has been proved that migration of the biocides (quantity of substances released by tissue owing to the action of water and other solvents) and other components contained in Legiotex® is lower than that established in UNE-EN 1186:20002 of 10 mg/dm<sup>2</sup>, which is the limit permitted for plastic containers which are to contain food products for human consumption. Therefore Legiotex® does not need any specific waste management.

Legiotex® is an inert product, which is both easy to use and harmless for the environment and human beings, capable of preventing proliferation of *Legionella pneumophilla*.

**Legiotex**<sup>®</sup> is certified by the Oeko-Tex certificate Standard 100 Class III, which proves it is harmless when it comes into contact with skin.

The bactericide effectiveness of **Legiotex**<sup>®</sup> has been tested at independent laboratories. The data obtained under real operating conditions proves that its biocide properties remain unaltered after over 6 months. The *in vitro* tests with the *Legionella pneumophilla* prove its total efficacy, as can be seen in the tests carried out in selective agar-agar1.

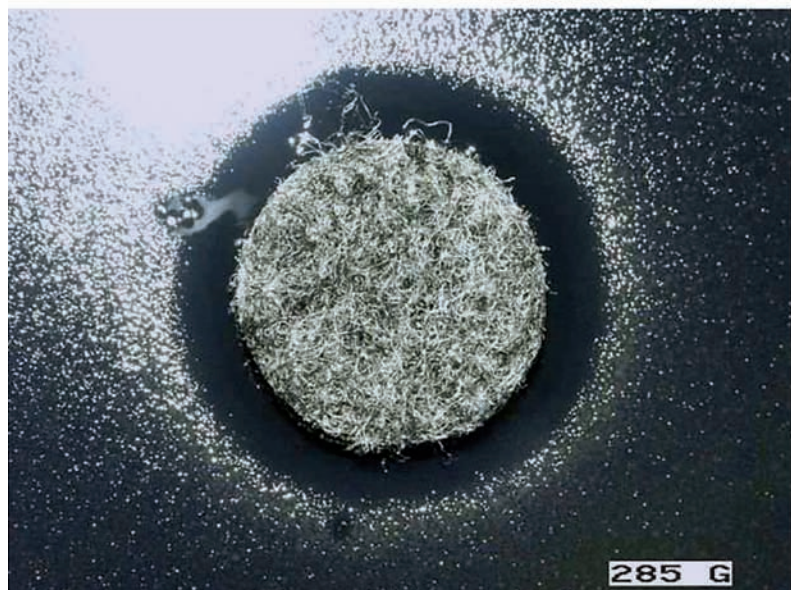
Likewise, **Legiotex**<sup>®</sup> is effective against different bacteria and fungus, such as:

- *Escherichia coli* (in Petri dish)
- *Staphylococcus aureus* (in Petri dish)
- *Enterococcus faecalis* (in Petri dish)
- *Aspergillus niger* (en air recirculation)

## ADVANTAGES OF LEGIOTEX<sup>®</sup>

- Powerful biocide action against diverse bacteria.
- Effective filtration of aerosol sizes where *Legionella pneumophilla* can be transported.
- Elimination of the plume given off in gas exhaust ducts.
- Long working live (6 months)
- Water savings (between 20% and 49%) and therefore of biocides since they return to the condensed water tank.
- Silencer effect (8.5% reduction in the noise level) which permits reducing the decibels of the devices and therefore a reduction in noise pollution.





## APPLICATIONS

Legiotex® targets installations using water in open circuit operations which produce **aerosols**, whether inside or outside buildings:

- Cooling towers and/or evaporation condensers.
- Air conditioning ducts.
- Heated swimming pools and thermal installations.
- Open-air cooling elements using aerosolisation.
- Other devices where water accumulated and can be aerosolised.



Legiotex® meets the technical / health requirements of the personnel involved in installation, maintenance, inspection and treatment of this kind of facility. It is designed for:

- Health care personnel at public health care institutions.
- Engineers, architects, fitters and maintenance personnel of the equipment.
- Companies working in treatment and disinfection of facilities.
- People in charge of maintenance of the facilities.

### Legiotex® water

We are in the final development stages of water filtration using Legiotex® in two formats:

- Hot and cold water systems: pipelines and tanks (storage tanks, boilers, etc.).
- Showers.







## INSTALLATION

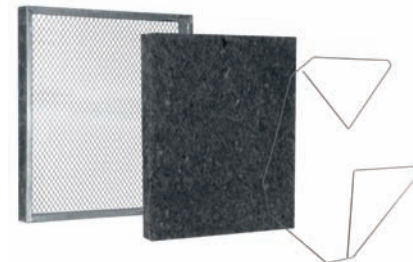
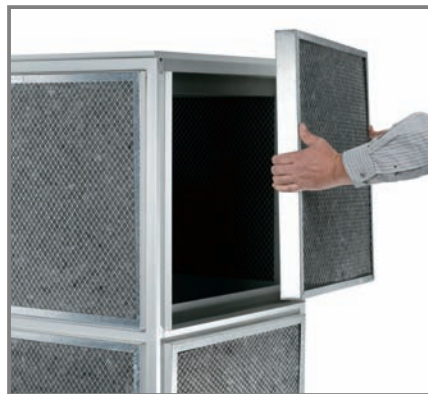
**Legiotex**<sup>®</sup> comprises a non-woven filter and supporting structures. These structures must be air-tight so that the incoming and outgoing air from the cooling tower passes through the **Legiotex**<sup>®</sup> filters, thus ensuring elimination of *Legionella pneumophilla* that could be contained in the steam. At the same time the filter prevents external agents from entering the tower that could represent nutrients to feed and enhance proliferation of bacterial colonies in cooling towers.

**Legiotex**<sup>®</sup> does not require any special maintenance once fitted, only a visual inspection to ensure that the structural items remain air-tight, consequently guaranteeing all the air is filtered, and that dust or other foreign bodies are not clogging the filters.

Once the operating guarantee of **Legiotex**<sup>®</sup> has expired (after 6 months), replacement comprises removing the frames of the structure, and replacing the used filters for new ones supplied by **Logrotex**. This is a simple operation that can be carried out by the maintenance staff at the facility.



For greater convenience, replacing the **Legiotex**<sup>®</sup> filters can be made to coincide with cleaning and disinfection of the cooling towers, as required in accordance with Royal Decree 865/2003 which is required every 6 months.



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esta instalación

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