





Via Solferino, 27 P.O Box 7 46043 Castiglione delle Stiviere (MN) - Italy T +39 0376 94261 - F +39 0376 631482 myrthapools.com

info@myrthapools.com

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A new way to naturally improve the hygienic performance of your pools.





# ALWAYS HEALTHY

You probably often find yourself checking if a glass is clean before pouring water into it. It's something we all do. Because water hygiene is fundamental and happens wherever water is contained. The same applies to a pool tank.

If you think the water in your pool is healthy just because it looks clear, think again. Today, the most widely used water treatments allow you to neutralize just a small number of bacteria present in the tank. The majority of bacteria stays alive on the surfaces, both those immersed in water and hidden ones.

Myrtha® technology is a new opportunity to tackle bacterial growth and proliferation effectively. This innovative system has been conceived and patented by Myrtha Pools to overcome the sanitary and structural limits of traditional pool-manufacturing technologies.

Beside ensuring great reliability, robustness and maximum waterproofing, Myrtha® technology with white PVC coating contributes to the improvement of the hygienic and sanitary conditions of every pool.

Due to the presence of Titanium Dioxide used for the PVC white pigmentation, Myrtha® technology uses natural light to tackle bacterial biofilm proliferation through a natural process:

### » ALWAYS ACTIVE » HARMLESS TO HEALTH

» COST-FREE » WITHOUT CHEMICALS ADDED

# **MYRTHA THE FIRST CHOICE TO NATURALLY TACKLE WHE THE BACTERICAL BIOFILM PROLIFERATION**

A scientific study by Myrtha Pools in collaboration with the University of Rome Foro Italico.

Among the main factors on which the hygienic status of a pool relies, such as water quality, type of filter, circulation system and chlorine system, the coating material of the tank is of the utmost importance. A wide rich scenario is now available for pool manufacturers. The pool's outer finish which is contact with water is usually chosen based on different criteria such as aesthetics, guality, costs and durability.

That being said, how do different coating materials behave from a hygienic-sanitary perspective? We've tried to answer this question with an over a year-long scientific study whose results were presented in May 2017 on the occasion of the 7th ICSPS, the International Conference on Swimming Pool and Spa waters.

# **BIOFILM IS A RESERVE OF POTENTIALLY PATHOGENIC BACTERIA**

With the aim to rank the most performing materials in terms of hygiene and sanitary conditions of pools, we've confronted the levels of biofilm proliferation by focusing our attention on two of the most harmful bacteria which grow most frequently inside pool water: the Pseunsomonas aeruginosa, the most common a gent implicated in over 50% cases of otitis, and the Enterococcus faecalis, indicator of potential contaminations in swimming pools.







# **BIOFILM GROWS ON ALL POOL** SURFACE MATERIALS

By laying these two types of bacteria on different pool surface materials immersed in a pilot pool, we've measured the bacterial adherence during various time frames using predefined test protocols and mfDNA, a new analysis method based on the extraction and implementation of the bacterial genomes in real time.

### THE PILOT POO

It simulates the real changing pool environmental condition, thus allowing to study the reaction of different materials exposed to prolonged bacterial cultivation

## **DIFFERENT MATERIALS SHOW DIFFERENT RESPONSES TO BACTERIAL ADHESION**

After a 14-day exposure, the tested materials showed different responses to biofilm induction. Myrtha® White, in particular, displayed highest resistance to bacterial development and adhesion.





# **MYRTHA® WHITE IMPROVES SANITATION** AND HEALTH CONDITIONS IN POOLS

This resistance is due to the presence of Titanium Dioxide (TiO<sub>2</sub>), a harmless element for health used for the PVC white pigmentation. This chemical compound has photo catalytic properties that naturally use light radiation to eliminate the bacteria through an oxidation process.

### EVOLUTION MEMBRANE

1 Myrtha® White 2 Reinforcing web 3 High resistance PVC sheet 4 Synthetic fleece 5 Concrete pool floor



BIBLIOGRAPHY Valeriani F., Gianfranceschi G., Vitali M., Protano C., Romano Spica V. Development of the laboratory "CavyPool" for assessing treatments and materials for swimming pools. Ann Ig. 2017;29:548-560. doi: 10.7416/ai.2017.2184.

