

Antimicrobial Water Tanks



Over time, every water pipe and every tank becomes contaminated with hundreds of species of bacteria, fungi and algae.

The growth of harmful microorganisms inside drinking water distribution pipes and tanks results in a range of undesirable effects.

Hence the need to include new, effective, durable and eco-friendly antimicrobial agents in the plastic. d₂p[®] is a proven antimicrobial technology, specifically developed to protect plastic drinking water tanks from the development of biofilm.



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Water is not sterile, regardless of the extent to which it is treated. Water storage and transmission vessels are susceptible to biofilm build-up on the inner surface, and once established it is extremely difficult to remove.

How microbes enter water tanks

Microbes can enter the distribution pipes by a variety of pathways and populate a microbial biofilm on the inner surface of the pipes and eventually storage tanks.

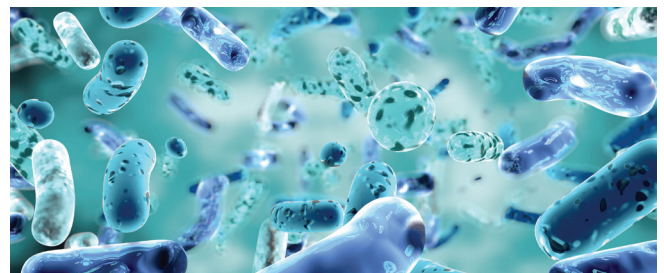
Biofilms develop in all drinking water distribution and storage systems, despite the presence of any disinfectant introduced at the water-treatment works.

The Facts

- In any, home, hospital, food industry factory, school, office etc. plastic pipes are today the backbone of water distribution systems.
- Microbes which exist inside the distribution pipes have the ability to multiply and produce BIOFILM.
- Biofilm poses a threat by hosting many pathogenic and toxin-producing microorganisms which cause:
 - Aesthetic deterioration - change in color, odor, etc.
 - Blockage of pipes and reduction in carrying capacity.

Certifications and Compliances of the d₂p

- **NSF/ANSI 14, NSF/ANSI/CAN 61.** Approved and certified for PE, PP and PVC Pipes - Certification to their NSF Guideline 533 Certification Program.
- **Passed** the ASTM E2180-07 Anti-fungal test with 99.99% kill rate as well as the qualitative ASTM G21-13 with no mould growth.
- **Passed** the ISO 22196:2011 Antibacterial test with 99.999% kill-rate.
- **Polymer passed** the migration test in the U.S.
- 21 CFR (US FDA) Part 177.1520 Clauses (c)(2.1) and (d).
- **Polymer passed** the migration test as per European Commission Regulation No. 10/2011.
- The active in d₂p[®] 97000 MBs is registered with the US EPA for the control of fungi and bacteria causing stain, odour and/or degradation of physical properties in polymers used in manufacturing or coating in food contact finished articles.



Polymicrobial biofilm epifluorescence.

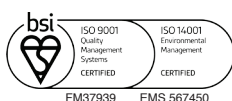
NOTE: d₂p[®] 97000 masterbatch is supplied for use subject to the laws of the territory in which the water pipes and tanks are to be used, and Symphony gives no warranty as to the laws of any particular territory.

1: <http://info.nsf.org/Certified/PwsComponents/Listings.asp?Company=C0328082&Standard=061> (07 August 2018)



ISO/IEC 17065
Product Certification Body
#0216
Certification Program
Accredited by the
American National
Standards Institute

Disclaimer: The information provided is general information. For specific applications, please consult our Technical Department. It is the customer's responsibility to obtain regulatory approval for the intended purpose in the country or countries concerned.



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