SANIKILL

The first monochloramine-based disinfection technology.

Distributed by:

goodwater

Sanipur S.p.A.

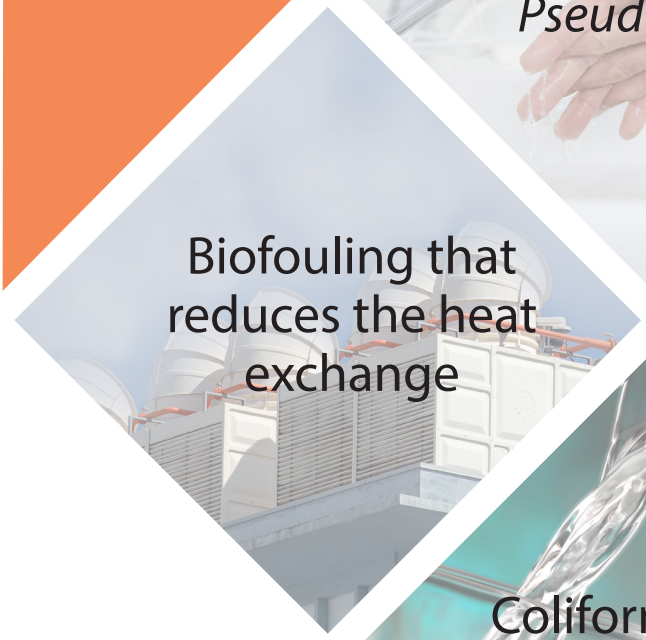
www.sanipur.it

WATER IS A COMPLEX SYSTEM THAT IS ALSO MADE UP OF BACTERIA, SOME OF WHICH ARE DANGEROUS

WHERE THREATS ARE EVOLVING ALL THE TIME

- **DOMESTIC HOT WATER**
- **INDUSTRIAL PROCESS WATER**
- **POTABLE WATER**
- **COOLING WATER**

WHAT ARE THE THREATS?



THE CORRECT APPROACH TO SOLVE THE PROBLEM

1 STEP

PREVENTION

Sanipur uses the WaterSafety360 plan; the best approach to evaluate the risks and to develop a plan of action.

A qualified team of expert will create a tailor-made proposal to align with the World Health Organization (WHO) standards.

2 STEP

CHOOSE THE CORRECT DISINFECTANT

Using the correct disinfectant is the key factor in preventing water hygiene issues.

SANIKILL is the ideal solution to prevent waterborne pathogen such as *Legionella* and *Pseudomonas*.

3 STEP

MONITORING AND TAKING CARE

Each SANIKILL system is equipped with monitoring panel SENTINELLA that is a state-of-the-art technology.

Thanks to remote control and remote management it is possible to check all parameters from the comfort of your device.

1 STEP

PREVENTION IS BETTER THAN REACTION

WATERSAFETY360: THE MANAGEMENT AND SAFETY PLAN

Sanipur offers the best approach to manage specific risks that is aligned with the WHO standard for the WSP drafting.

SITE INSPECTION

Collection of site information and documents, data and photographic material and water sampling.

CRITERIA EVALUATION

Data analysis, identification of the critical points, definition of responsibility, and list of required steps to be implemented.

RISK ANALYSIS

Risk analysis for each critical point and development of the WaterSafety360 plan by a team of experts.

MANAGEMENT PLAN

Establish a procedure to verify that the WaterSafety360 is working effectively and will meet the redetermined goals.

SITE INSPECTION PLANNING

Organise site inspection plan to check the progress and quality of the WaterSafety360 plan over time.

MAINTENANCE LOGBOOK

Establish documentation for the WaterSafety360 plan in order keep your site safe.

CONSIDERATION WHEN CHOOSING DISINFECTANT

A TEMPORARY SOLUTION FOR THE PROBLEM

Using a common or low-cost disinfectant is not the best solution. Whilst you can get good result, these can be short-lived and come with some drawbacks.

PERSISTENT CONTAMINATION

With a common disinfectant there is a temporary resolution of the problem and not very effective.

CORROSION PROBLEM

The health of the pipes should not be underestimated. Many disinfectants cause pipe corrosion problems.

TOXICITY PROBLEMS

The use of chemicals in an inaccurate way can cause the formation of toxic by-products.

LEGAL RISK

Improper maintenance or unconscious use of disinfectants could also cause legal risks and bad reputation.

EXTRA COSTS

Relying on disinfection with the wrong or poorly managed products can lead to further costs, owing to: system shutdown, delay in production, less efficient heat exchange, expensive plant repairs etc.

2 STEP

CHOOSING THE DISINFECTION TECHNOLOGY

THE CORRECT DISINFECTANT IS THE KEY ELEMENT OF A GOOD DISINFECTION.

SANIKILL is

The patented monochloramine-based technology. It is the only system that produces the monochloramine directly in the pipe line.

SANIKILL FEATURES

SANIKILL: LET'S COMPARE THE MOST COMMON DISIFECTANT

	STABILITY	EFFICACY	BIOFILM PENETRATION	pH INFLUENCE	BY-PRODUCTS	MATERIAL COMPATIBILITY*	ON-SITE TESTING	AUTOMATIC/ REMOTE MONITORING
HYDROGEN PEROXIDE	+	±	±	+	+	−	+	+
CHLORINE DIOXIDE	±	+	±	++	±	−−	+	+
SANIKILL	++	++	++	+	++	++	+	++
Cu /Ag IONISATION	+	+	+	+	+	−	−−	−−
HYPOCHLORITE	−−	−	−−	−−	−−	−−	+	+

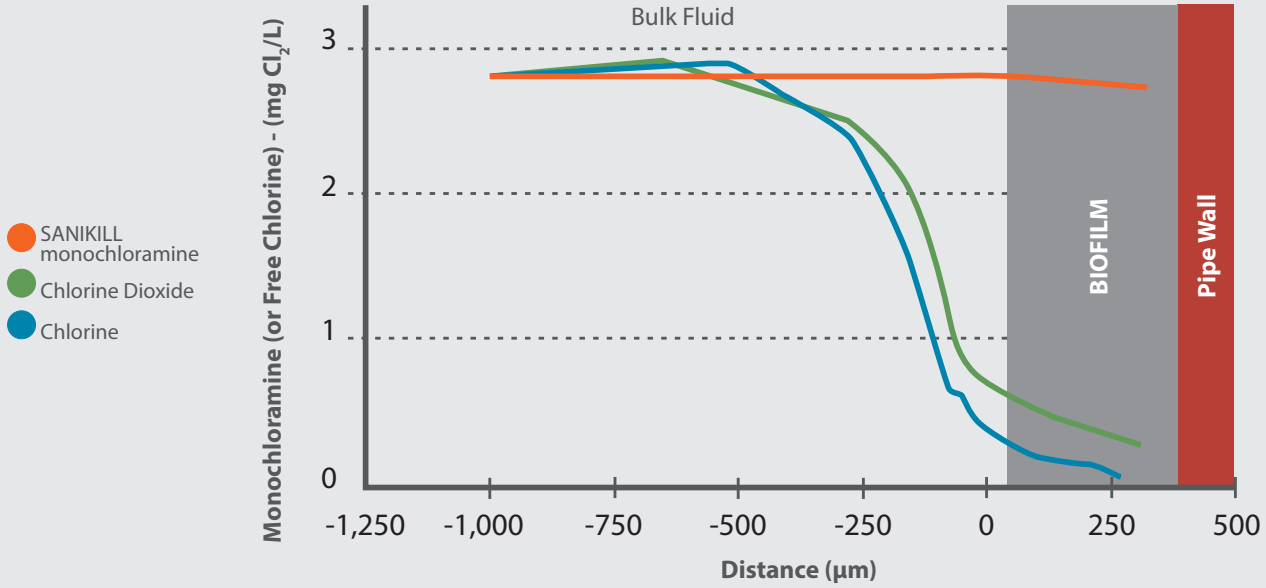
* Pipes material in water systems

++ Excellent + Good ± Satisfactory − Poor −− Extremely Poor

MAXIMUM PENETRATION OF THE BIOFILM

Monochloramine is the most effective disinfectant in the penetration of biofilm.

Better penetration of the biofilm means lower consumption of chemical reagents with subsequent cost reductions.

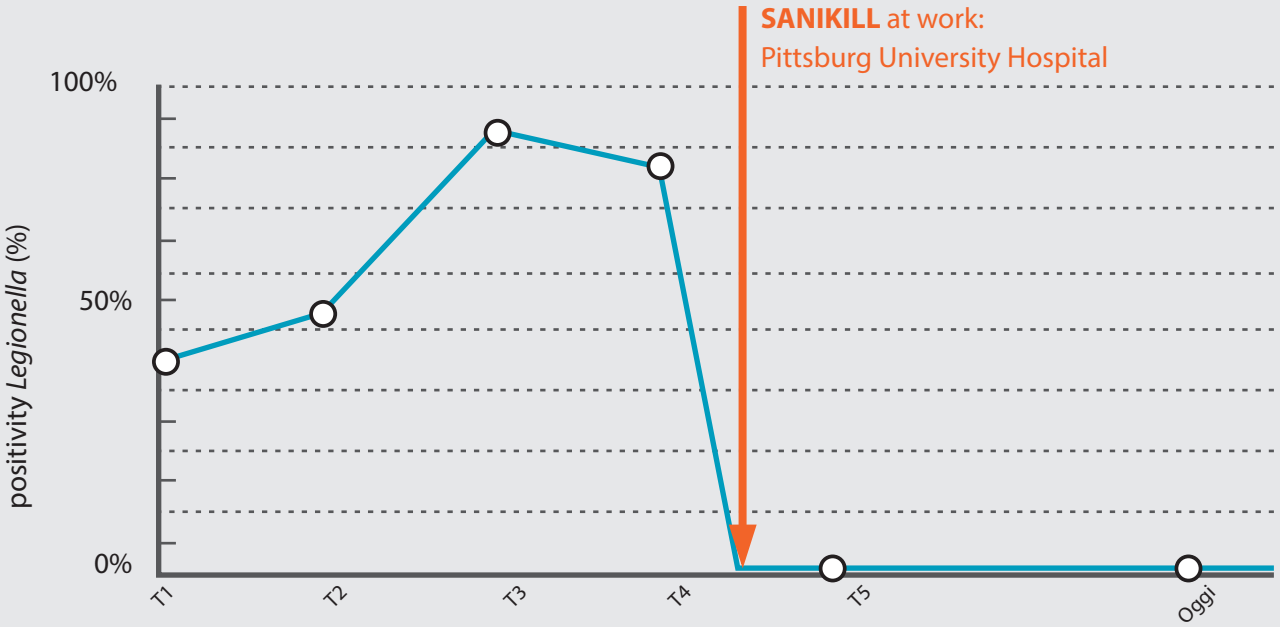


Source: adaptation biofilm penetration graph (Lee 2011)

SANIKILL IN DOMESTIC HOT WATER

Complete abatement of waterborne pathogens

Field studies demonstrated that just after one week from the beginning of the treatment *Legionella* was reduced by 97% with eventual reduction to 0% positivity. The disinfectant previously used in this structure was copper/silver ionization.



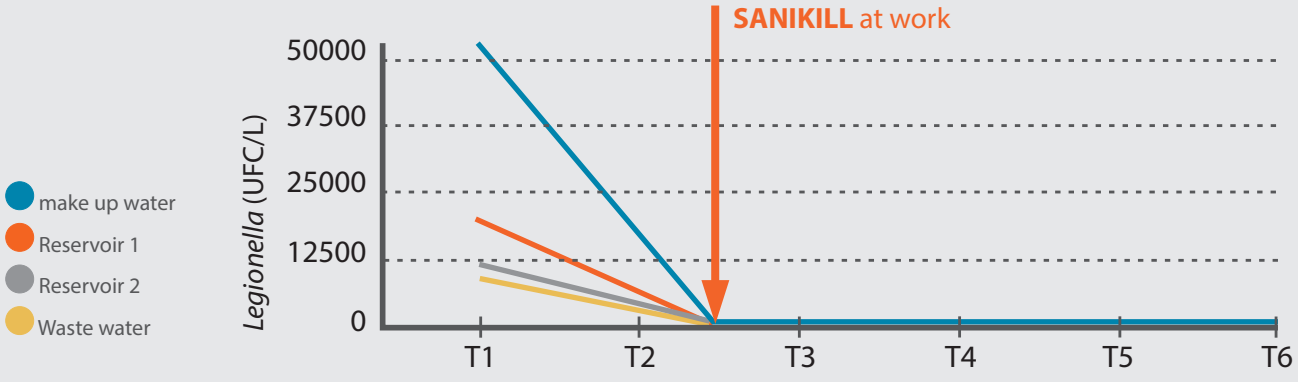
Source: adaptation field study results

SANIKILL IN COOLING TOWER

Complete abatement of waterborne pathogens

Thanks to this graph it is possible to see how *Legionella* reduces drastically already after a few hours from treatment from all 3 collection points.

This underlines the effectiveness of SANIKILL in the cooling towers.



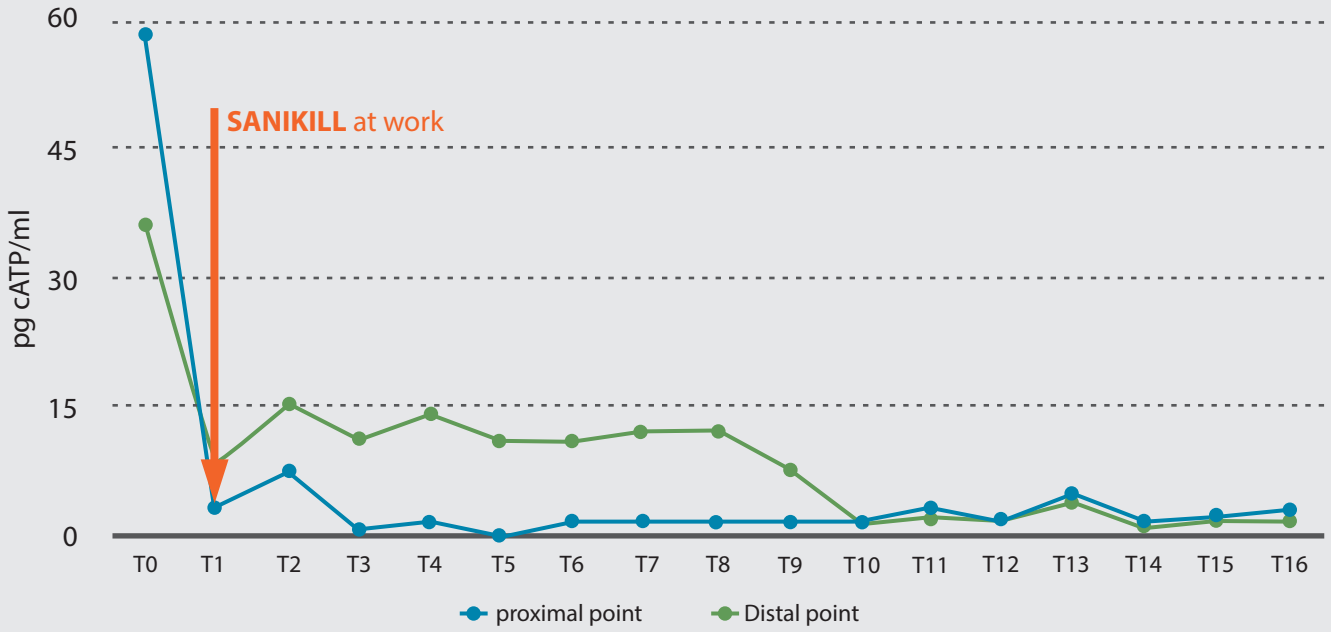
Fonte: "Coniglio et al_Effectiveness of in-situ generated MCA for the control of Legionella in Real Industrial cooling tower_ GJ2015"

SANIKILL IN POTABLE WATER

Rapid reduction of the microbiological state of water

The graph represents the trend of the ATP values (generic indicator of the general microbiological state of the water) detected in the context of an aqueduct application of the SANIKILL technology.

The values that have been represented are the proximal point and the distal point from the place where dosage takes place. The trend highlights the rapid reduction of ATP values following the monochloramine dosage.



Source: adaptation field study results

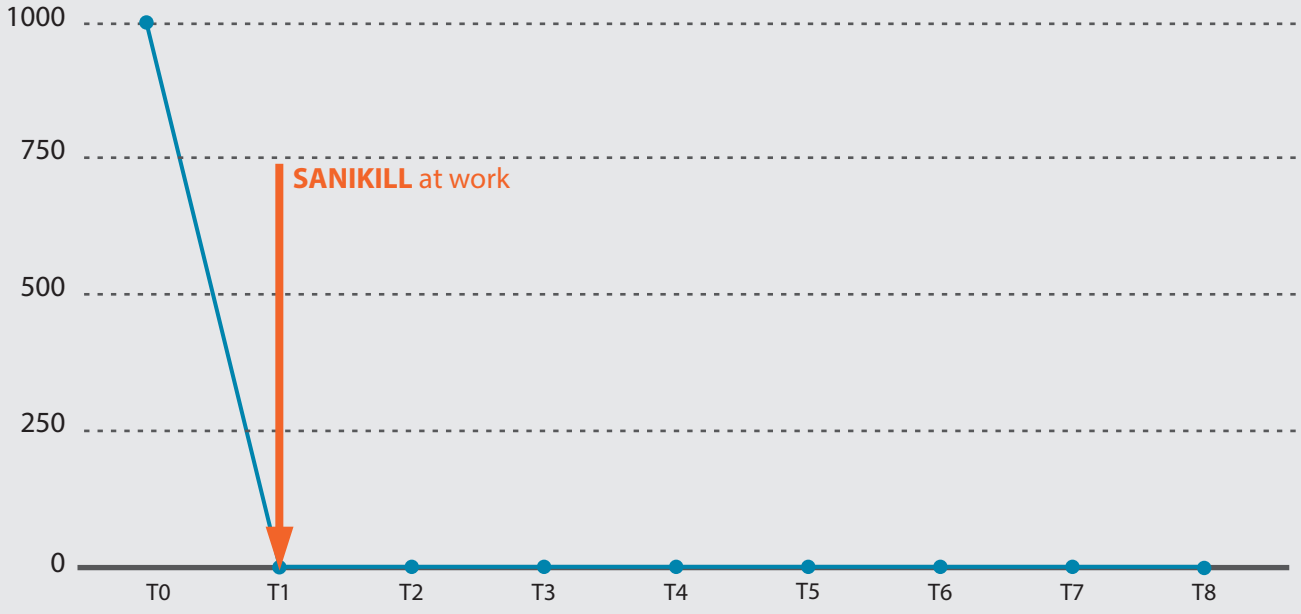
SANIKILL EFFECT AGAINST *PSEUDOMONAS*

Complete abatement of waterborne pathogens

The graph represents the progress of the *Pseudomonas* levels in a structure with about 400 beds.

The facility had been affected by a contamination and values from 103 UFC/250 ml (T0 in the graph).

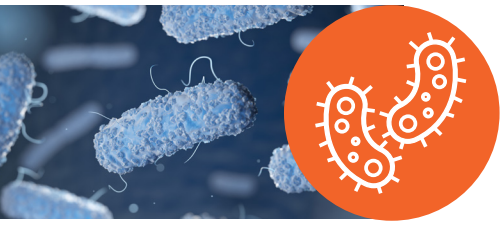
After one week from the beginning of the treatment *Pseudomonas* was reduced.



Source: adaptation field study results

2 STEP CHOOSE THE CORRECT DISINFECTANT

SANIKILL EFFECT



UNDESIRED MICROORGANISMS' REDUCTION

• The most effective solution against waterborne pathogens and other unwanted microorganisms.
• Studies demonstrated that one week from the beginning of treatment contamination was reduced by 97%.

NO CORROSION RISK

• Pipe corrosion is one of the higher risks for the water pipe system. Chlorine and chlorine dioxide have shown to be extremely aggressive against every pipe material.
• Monochloramine is compatible with all the piping material (copper, plastic, stainless steel, ...)

MAXIMUM BIOFILM PENETRATION

• High penetration capacity of the biofilm without wasting chemical agents.
• Monochloramine has the ability to penetrate the biofilm ensuring the best disinfectant efficacy.

HIGHEST STABILITY

• Monochloramine is a stable molecule that remains 100% in its active form for a long time, it ensures an adequate disinfection.
• Monochloramine is a very stable and predominant specie at pH above 7.2.

NO DANGEROUS BY-PRODUCTS

• Monochloramine produces less DBPs than chlorine, chlorine dioxide or copper/silver.

NO EXTRA COSTS

• Monochloramine remains 100% in its active form for a long time and this results in the reduction of costs for emergency interventions.
• The maintenance costs of the plants are reduced, thanks to the compatibility of monochloramine.

COMPLIES WITH THE STRICTEST REGULATIONS

• The only in-line monochloramine generators that comply with the European biocide directive for drinking water.

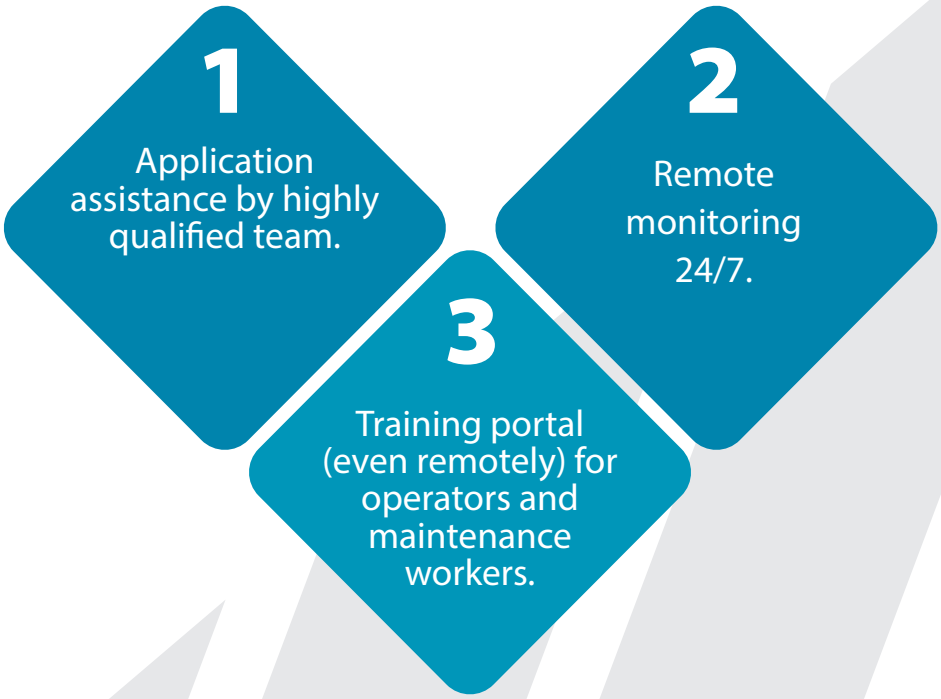
How the SANIKILL technology works?

SANIKILL, THE MONOCHLORAMINE

- The molecule is prepared directly in the water to be treated, without accumulation in tanks that can cause the formation of by-products, harmful residues and polluting waste.
- The concentration of the biocide remains constant, adapting to the variation in water consumption.
- The software and hardware technology are directly produced by Sanipur. It guarantees maximum control in the preparation and dosage of the biocide.
- SANIKILL technology guarantees the highest safety standards.
- SANIKILL is completely customizable, based on the specific requirements of the customers.

NO EFFORT IN A DAILY USE:

SANIPUR AND GOODWATER THINKS OF EVERYTHING



2 STEP SANIKILL FOR EACH APPLICATION

SANIKILL: THE WIDEST RANGE OF MONOCHLORAMINE GENERATORS IN THE FIELD

SANIKILL TEC

LARGE APPLICATION

Cooling towers, process water, municipalities, buildings cold water applications.

SANIKILL ONE

STANDARD

Large nursing homes and hospitals, condominium complex, commercial building, hotels…

SANIKILL LITE

SMALL APPLICATION

Nursing homes, small hospitals and factory changing rooms.

SANIWARE

WATER CONTROL

The perfect combination to keep your water under control thanks to Saniware, which monitors the quality, and SANIKILL, which disinfects the water.

3 STEP MONITORING AND TAKING CARE

ALWAYS IN TOUCH WITH YOUR DISINFECTION SYSTEM

SENTINELLA in the monitoring panel allows you to manage SANIKILL units remotely 24/7.

USER FRIENDLY

An easy-to-use interface with the most sophisticated technology.

ALARM NOTIFICATION

Real time emails and messages notifications.

24H DATA RECORDING AND DOWNLOAD

All the data is recorded 24/7 and can be download at any time.

REMOTE ACCESS

No need to be on site to manage SANIKILL units. You can easily use your device.

PREDICT THE PROBLEM

Data mining system with technology based on artifical intelligence interface.

Distributed by:
Goodwater Ltd, UK
23-24 Ivanhoe Rd,
Wokingham, RG40 4QQ
P: +441189 735003
info@goodwater.co.uk

Produced by:
Sanipur S.p.A.
Via S. Quasimodo, 25
25020 Flero (BS) - Italy
P: +39 030 358 2390
export@sanipur.it

www.sanipur.it