



# **COPPER AND SILVER IONISATION**



# Are you a Responsible Person for health and safety for your business?

The health and safety of everyone using your premises is a priority. Legionella is a dangerous bacteria that causes the potentially fatal Legionnaires' disease, and it can proliferate in badly maintained water systems. You know it must be controlled, but is there a way to control Legionella and other waterborne bacteria without tainting the water or damaging the planet?

For many years, the use of chlorine-based products was seen as one of the most common options. It can be effective, but maybe you would prefer to use something that isn't a toxic chemical, doesn't come with the risk of corroding pipework, and kills biofilm as well as bacteria, preventing it from reoccurring.

Copper and Silver Ionisation from Rock Compliance is the perfect solution. Particularly popular with the healthcare sector, it combines outstanding results with safety and ease of use.



## Effective, sustainable, safe

Copper has been known for hundreds of years as an effective killer of pathogens and diseases, including Legionella Pneumophila. Copper and Silver Ionisation is a process that was originally carried out by NASA in its Apollo programme to purify astronauts' water, making it a truly 'space-age' method of water treatment!

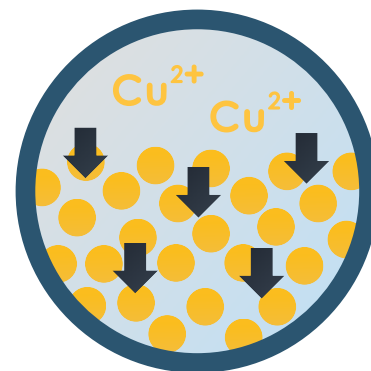
Nowadays, everyone wants to be more environmentally responsible. Copper and Silver Ionisation is low energy and requires no nasty chemicals. It's also very easy to use, without the need for COSHH transport and storage precautions.



## How does it work?

The technology in our ionisation solution generates a constant supply of ions at a predetermined rate and delivers them in a highly controlled and systematic way, in line with proportional control. The rate at which the ions are released is automatically maintained by a reliable and easy-to-operate control unit.

It starts with the release of electrically charged copper ions ( $\text{Cu}^{2+}$ ), which search in the water for particles of opposite polarity, such as bacteria, viruses and fungi (usually negatively charged).



The positively charged copper ions form electrostatic compounds with the negatively charged cell walls of the various microorganisms. These compounds disturb the cell wall and cause nutrient uptake to fail.

The copper ions then penetrate the cell wall and, as a result, create an entrance for silver ions ( $\text{Ag}^+$ ) to penetrate the core of the microorganism. Silver ions bond to various parts of the cell, such as the DNA and RNA, causing all life support systems in the cell to be immobilised.

As a result, there is no more cellular growth or cell division, causing bacteria to no longer multiply and eventually die out. The ions remain active in the water until they are absorbed by a microorganism.

An ultrasonic flow meter or water meter (depending on the application) provides the means of dosing proportionally, meeting the requirements of HSG274 part 2 and HTM 04-01. The accurate dose-rate control system then maintains precise ion levels, providing residual protection and prevention of recontamination.

# THE BENEFITS

## Copper and Silver Ionisation



WATER TREATMENT

	Cu/Ag Ionisation	UV	Ozone	Thermal Eradication	Chlorine Dioxide	Chlorine
No chemicals used	✓	✓	✓	✓	✗	✗
Ability to penetrate established biofilm	✓	✗	✗	✗	✓	✓
No corrosive damage to pipes	✓	✓	✗	✗	✗	✗
No toxic/harmful byproducts	✓	✓	✗	✓	✗	✗
Not temperature dependent	✓	✓	✓	✗	✗	✗
Low energy consumption	✓	✗	✗	✗	✓	✓
Long-term decontamination	✓	✗	✗	✗	✗	✗
Residual effects	✓	✗	✗	✗	✓	✓
Simple application	✓	✓	✗	✗	✗	✗

## Rock Compliance and Necon Technologies

Working in conjunction with our partner, Necon Technologies, Rock Compliance can provide a bespoke quotation suitable for the treatment of water on your site.

For more information on Copper and Silver Ionisation, please contact Business Development Manager, **Ben French**

☎ 07788 421651

✉ [benfrench@rockcompliance.co.uk](mailto:benfrench@rockcompliance.co.uk)







Rock Compliance is a progressive company in the compliance market. We have three fundamental values: **minimising risk, delivering compliance** and **making it simple** for our clients. We achieve this by continually reducing actual risk through investigating root cause and taking the necessary action on the back of all non-conformances.

## The result?

- An ongoing reduction in the number of non-conformances
- Low risk, compliant systems
- Minimised and predictable spend
- Highly satisfied customers who trust Rock Compliance with all their compliance needs



**Ben French**  
Business Development Manager

 07788 421651

 [benfrench@rockcompliance.co.uk](mailto:benfrench@rockcompliance.co.uk)

 [www.rockcompliance.co.uk](http://www.rockcompliance.co.uk)

 [rock-compliance-limited](https://www.linkedin.com/company/rock-compliance-limited)



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Head Office - Unit 2, 10 Tything Road West, Arden Forest Industrial Estate, Alcester, Warwickshire, B49 6EP