



Powerful Solutions for
the Water Industry



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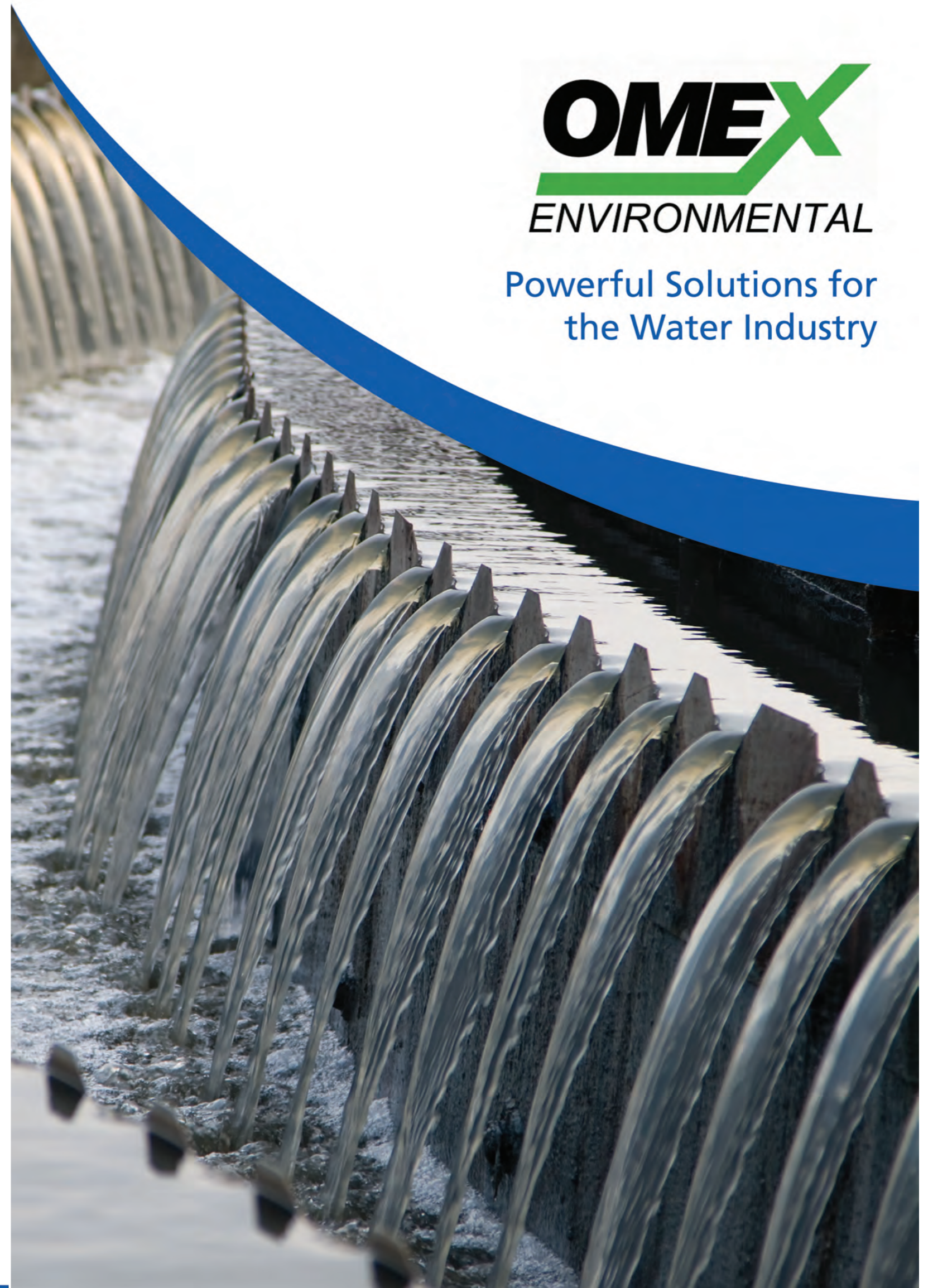
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Nutrition



In biological wastewater treatment, microorganisms metabolise soluble pollutants to produce carbon dioxide, water and more microorganisms (sludge). Nutritionally speaking, most wastewaters are unbalanced. To ensure optimal performance from the microbial populations their diet needs to be balanced with the correct ratios of mineral nutrients. The most likely macronutrients to be deficient are Nitrogen (N) and Phosphorous (P). Omex Environmental has developed the highly successful **Nutromex** range of **N & P** solutions to optimise performance in both aerobic and anaerobic systems.

The reducing environment of anaerobic systems often results in essential trace elements becoming unavailable to the microorganisms. This can adversely affect system stability and biogas production. **Nutromex TEA** solutions can provide a wide range of essential trace elements, in a form fully bio-available in anaerobic conditions, to optimise system performance.

pH Control



The **Magmex** range has been developed as the environmentally friendly answer to the problems of neutralising wastewater. Based on Magnesium Hydroxide and formulated as a concentrated suspension, **Magmex** is a safe, easy to regulate alternative to the more traditional hazardous products such as caustic soda.

Magnesium is also an essential element known to have beneficial effects on anaerobic bacteria. In anaerobic conditions the pH of the environment is a key factor in the growth of bacteria. Most bacteria cannot tolerate pH levels above 9.5 or below 4.0. Generally, the optimum pH for methane forming bacterial growth lies between 6.5 and 7.5. It is very important that the pH be maintained above 6.5 and that sufficient alkalinity is present to ensure that the pH will not drop below this point. For this reason, **Magmex** can also be introduced into anaerobic digesters to neutralise excess acid.

Completing the **Omex Environmental** range of neutralisers is **Calmex**, a high concentration lime suspension.

Septicity Control

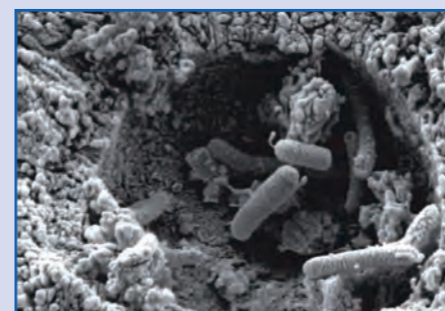


Odour problems are of growing concern to Wastewater Treatment and Municipal Sewage Treatment Plants. Septicity problems generally occur when the bacteria in the wastewater utilise all the available oxygen and start to reduce any sulphates present to sulphides. Lack of air supply, stagnant areas and warm temperatures all promote this undesirable biological activity. Apart from the unpleasant odour, the corrosive nature of the resultant gases can be catastrophic to sewers, reducing asset life to less than 5 years in some cases. Add to this the problems that sulphides can cause in the aerobic environments of the treatment works, and the need to control sulphides becomes obvious.

Anomex has been developed to prevent this sulphide gas build-up and is available in both sodium nitrate and calcium nitrate forms. Both products are proven to be extremely cost effective septicity control agents tested, used and approved by UK water companies.

Omex Environmental can also supply and install chemical dosing systems. In addition to the already proven range of 2500, 6000, 10000, and 15000 litre units, **Omex Environmental** can custom design systems to individual specifications.

Bioaugmentation



The main purpose of a biological treatment plant is to break down waste organics. Performance and cost effectiveness is highly dependent on microbial strains present. In many situations the biological population in an effluent plant is not ideally adapted to provide optimum performance.

Omex Environmental now has a complete range of bioaugmentation products, individually tailored for all types of effluent. These products contain bacteria that are naturally occurring, group 1, non-pathogenic that do not disrupt the existing environment. These blends result in products with the best possible performance with a broad pH and temperature tolerance. Innovative bio-solutions have a proven track record in reducing wastewater plant operating costs, improving effluent quality and simplifying plant operations.

Speciality Products



Omex Environmental offers many more products alongside the 'standardised range'. Speciality products include **Bulk-X**, a cost effective alternative to sodium hypochlorite, for control of filamentous bulking and **Biomex** which promotes Biomass activity and growth in biological wastewater treatment plants.

In addition, **Omex Environmental** can supply a range of coagulants, **Ferromex** and **Alumex**, used to assist with sludge settlement, flocculation and to improve the biological health of wastewater treatment plants.

Also available from **Omex Environmental** is the highly successful **Isomex** range of De-Icer chemicals. **Isomex** is already in use at most major airports in the UK. Included in the range are products for de-icing runways, pavements and walkways, railway platforms, bridges and car parks.