

# BioforZe DP 100

## BIOLOGICAL NITRIFICATION

### BIOTECHNOLOGICAL SPECIALITIES

#### INDUSTRY-MUNICIPALITIES

Two kinds of microorganisms are classified as nitrifying bacteria: *Nitrosomonas* spp and *Nitrobacter* spp. *Nitrosomonas* convert ammonium into nitrites, whilst *Nitrobacter* transform nitrites into nitrates.

Nitrifying bacteria are autotrophic (they can use CO<sub>2</sub> as the only source of carbon) and they develop relatively slowly (the typical doubling time is 8 to 16 hours).

They are very sensitive to oxygen concentration, and require highly aerobic conditions for maximum growth. Variations in pH, temperature and concentration of organic compounds (general or specific, due to inhibitory effects) can also have a negative impact on the development of these bacteria.

Consequently, the population of nitrifying bacteria in water treatment plants is frequently destroyed or washed out from the medium, due to its inability to reproduce competitively at a fast enough rate.

**BioforZe DP 100** is a product formulated from nitrifying bacteria that is particularly designed to seed water treatment mediums to achieve effective transformation of ammonium into nitrates.

By using selected strains of *Nitrosomonas* and *Nitrobacter*, the bacterial cultures can function in a wide range of pH values and have a higher toxicity threshold with respect to ammonium and nitrites. Ammonium and nitrites can inhibit the growth of these highly sensitive microorganisms.

**BioforZe DP 100** is formulated with strictly non-pathogenic microorganisms, according to European Directive 2000/54/EC.

#### ADVANTAGES

- Accelerates the initiation of nitrification in new plants started up for the first time or in plants that operate seasonally.
- Maintains consistent nitrification in treatment plants that have had problems with this reaction in the past.
- Seeds the water treatment medium when the biochemical conditions have limited or interrupted nitrification.

## **DOSAGE AND INSTRUCTIONS FOR USE**

The recommended dose for each case will be defined by our Technical Service, after a specific study of each application.

## **CHARACTERISTICS**

- Appearance: Liquid
- pH: 6.8 – 8.5
- Working temperature: 5°C – 43°C

## **RECOMMENDATIONS**

- Store in a cool, dry place.
- Avoid prolonged contact with the skin.
- In the event of contact with skin, wash thoroughly with soap and water.
- For further information, see the product's safety data sheet.

## **PACKAGING**

Boxes containing 4 non-returnable, 4-litre bottles.