

# PRESS RELEASE



[www.ecophos.com](http://www.ecophos.com)

# TABLE OF CONTENTS

THE ECOPHOS® GROUP .....	2
HOW IT ALL STARTED .....	3
KEY DATES .....	4
PASSIONATE ABOUT SCIENCE, PASSIONATE ABOUT BUSINESS .....	5
WHY PHOSPHATE? .....	6
A TRULY STRATEGIC BREAKTHROUGH: PHOSPHATE CAN BE PRODUCED IN A DIFFERENT WAY! .....	6
LATEST NEWS .....	7
ECOPHOS® TODAY AND TOMORROW .....	8
COMPLETED, CURRENT AND FUTURE PROJECTS .....	8
ONE TEAM WITH SEVERAL VALUES .....	8
TOMORROW .....	8
PRESS CONTACTS .....	9

# THE BELGIAN GROUP ECOPHOS<sup>®</sup>, a pionnier and innovator in the phosphates field

Ecophos<sup>®</sup> is a Belgian company incorporated in 1996 by Mohamed Takhim and based in Louvain-la-Neuve which develops and markets technologies that enable production and energy costs to be reduced by 30%. What's more, Ecophos<sup>®</sup>'s processes allow urban waste as well as lesser quality rocks, which up to now have been very little used, to be put to effective use.

Ecophos<sup>®</sup> currently holds ten international patents, thanks to an investment of more than 45 million euros since its creation.

The group employs 300 people and has its headquarters and main research centre in Louvain-la-Neuve, and also has a design office in Lummen, a centre of excellence in Bulgaria and three production sites in Europe (The Netherlands, France and Bulgaria) for a production capacity of 620,000 tonnes per year.

## Ecophos<sup>®</sup> KEY FIGURES

### EMPLOYMENT

**300**

### TURNOVER IN 2016

**133**  
MILLION EUROS

### EBITDA IN 2016

**13,3**  
MILLION EUROS

### INVESTMENTS IN 2017-2021

**210**  
MILLION EUROS

### INVESTMENTS IN 2016

**42.8**  
MILLION EUROS

### PATENTS

**10**

### SHAREHOLDERS

**95%** MOHAMED TAKHIM  
**5%** ORAXYS

### INSTALLED CAPACITY (EUROPE)

**25%**  
OF THE MARKET

#### Press Contact

Dominique Frison  
Communication  
dominique.frison@ecophos.com / +32 474 528 445

#### Ecophos<sup>®</sup>

Avenue Jean Monnet 1  
B - 1348 Louvain-la-Neuve · Belgium  
www.ecophos.com



# HOW IT ALL STARTED

**When he created Ecophos® at the age of 20 when he was still a student, Mohamed Takhim no doubt never imagined that 20 years later, his company would be recognised worldwide in the phosphates sector and would employ almost 300 people.**

**Fascinated since childhood by the handling of materials** and by chemistry, the young man grew up in the Moroccan town of Khourigba, about one hundred kilometres from Casablanca. During a work placement carried out at the Office Chérifien des Phosphates (Cherifian Phosphates Office in Morocco) – the world leader in the field – the high school student discovered an entire universe. Above all, he found that the process for purifying phosphate proved to be very complex and sophisticated.

**Remembering an experiment carried out during practical work at high school**, he believed he was able to develop an alternative, simpler technique which would if the same results as conventional processes. Helped by his high school who provided whom with access to laboratories, chemicals etc. and the assistance of the head teacher's secretary to type up his

results, the young researcher tested his invention and filed his first patent. This was in 1994, when Mohammed Takhim was then 18 years of age

Keen to publish his process, the young inventor made several requests to take part in trade shows. In 1995 the Eureka tradeshow in Brussels offered him the opportunity to exhibit, and the panel awarded him the Gold Medal for chemistry. There then followed an independent evaluation of the invention by a professor from UCL, which reached a positive conclusion: yes the process was worth being developed.

**In 1996, at the age of 20, Mohamed Takhim officially created the Belgian start-up Ecophos®** with capital of more than three million euros raised from major Belgian venture capitalists (Capricorn, the GIMV, the Colruyt family and Luc Geuten).

While continuing his studies in Morocco than in France, which enabled him to pick up **3 degrees** (chemical process engineer, Project Management (MS) and business administration (MBA)), Mohamed Takhim continued with his **destiny of becoming a scientific entrepreneur**. As the years have passed, the business model has been refined around two objectives: to sell technologies under licence to phosphate producers, and on the other hand to position the business directly as a producer.

**Two objectives but one single common thread: the wish to combine technology, ecology and economy.** Ecophos® develops and markets technologies which enable production and energy costs to be reduced by 30%. Furthermore, these technologies enable urban waste as well as lower quality rocks to be recycled.

## KEY DATES



# PASSIONATE ABOUT SCIENCE, PASSIONATE ABOUT BUSINESS

**His entrepreneurial spirit and ability to mobilise teams have enabled Mohamed Takhim, since the age of 18, to realise his ambition to become a chemist and an entrepreneur.**

## **Some key words:**

**- On his young age:** "Starting my business in industrial chemistry at less than 20 years of age was atypical and abnormal. A real emotional hell, I was often attacked and my authority was ceaselessly called into question".

**- On risk capital:** "I have not forgotten that I was only 20 years of age when my partners injected 3 million euros by gambling on my phosphate purification chemistry discovery! This was a big risk".

**- On industrial culture:** "Up till now, the phosphate sector was a volume industry with a fairly standard industrial culture".

"The chemical industry has an "old school" culture: industrial operators have a seeing-is-believing attitude! This means that we had to build a prototype plant so that customers could see equipment that works with our process. As we did not do ourselves any favours by investing ourselves, we were to use up our funds without making any sales and regrettably, as a result, went bankrupt".

**- On prices:** "The pressure of the high demand for phosphate has made its price climb from 30 dollars per tonne in 2006 to a current price of 120 dollars, with a peak at 400 dollars in 2008".

## **- On the phosphate shortage:**

"With the announced shortage in high-quality phosphate, customers using standard technologies are in a tight corner because of the drastic rise in prices and are looking for alternatives. This requires a new and completely different approach. Current technology is 40 years old and the potential for improvement is completely exhausted".

**- On design:** "We have developed methods which enable us to capitalise on experience acquired in projects already carried out in the next projects. This way of working is inspired by design concepts which are widespread in the textile and fashion industries".



# WHY PHOSPHATE?

---

Phosphate is a raw material essential to the development of living organisms – humans, animals and plants. For example, human bone contains 85% calcium phosphate.

Phosphate is a raw material for fertiliser and animal feed. Without fertiliser, it would prove impossible to feed humanity sufficiently! The phosphate is extracted from phosphate rock but, a little like oil, global high-quality

phosphate resources will run out in 80 to 100 years. Hence the urgency to find innovative solutions in this field if we want to avoid a serious food crisis.

---

## A TRULY STRATEGIC BREAKTHROUGH: PHOSPHATE CAN BE PRODUCED IN A DIFFERENT WAY!

---

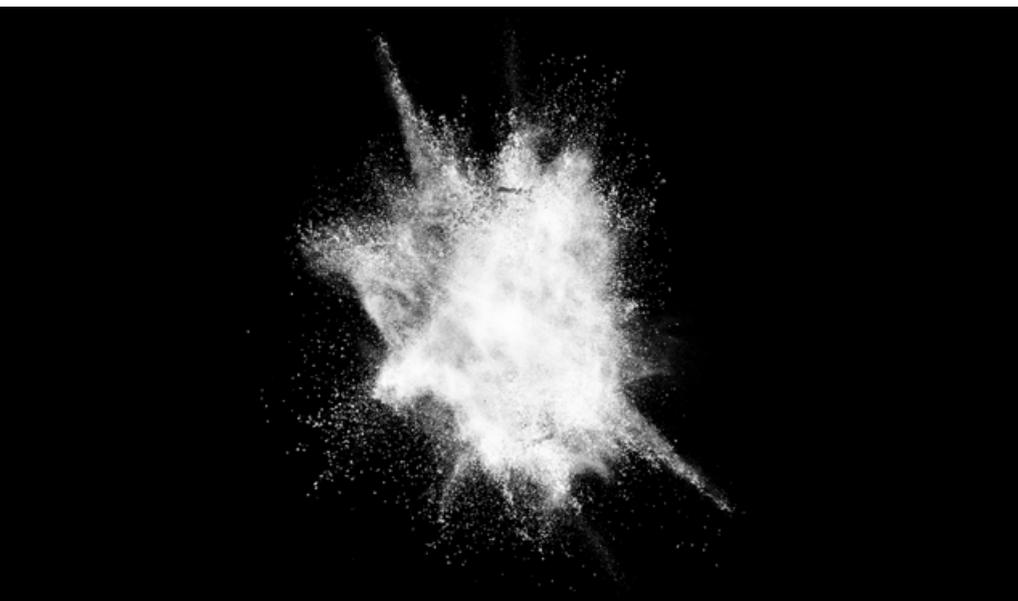
• **More accessible:** Ecophos®'s technology invented by Mohamed Takhim allows urban waste as well as lesser quality rocks, which up to now have been very little used, to be put to effective use. This process is fully in line with the "cradle to cradle" view: Ecophos® will be one of the first to industrially extract phosphates contained in the fly ash which comes

from the incineration of sludge from wastewater purification stations. This is the "urban mining" concept.

• **Purer:** This results in highly purified products, similar to the current based fertilisers, which enrich crops and provide high-yield nutritional elements for cattle.

• **More environmentally friendly:** Ecophos® develops and markets technology which enables production and energy costs to be reduced by 30%.

The high added ecological value is also marked by the elimination of any potential pathogen (hormones, for example) by incineration.



# LATEST NEWS

---

## 2017

### Start-up of the Aliphos plant in Dunkirk

This new plant will operate 24/7, on the site of a former refinery. 220,000 tonnes of Dical+ (di-calcium phosphate dihydrate) intended for animal feed use will be produced there per year at cruising speed. The investment amounts to 75 million euros and is allowing the creation of 90 jobs (45 directly and 45 indirectly).

After Rotterdam (the Netherlands) and Devnya (Bulgaria) this will be the third plant for Aliphos, which is a subsidiary of Ecophos®.

The French site will be the first put a product on the market which uses innovative phosphate extraction techniques. This phosphate has the best digestibility in the world of inorganic phosphates, improving the growth of animals while reducing waste.

### Contracts signed in India during the Royal visit

Conducted in India by King Philippe of Belgium in November 2017, Mohamed Takhim signed a service contract with a value of 15.5 million dollars. This contract concerns the equipment for the future plant for EGIL, a joint venture between Ecophos® and the Indian group GNFC.

This new plant, located in the state of Gujarat, should be operational in 2019, with an annual production capacity of 200,000 tonnes per year of Dical+ (di-calcium phosphate dihydrate) intended for animal feed.



## 2016

### New technological centre in Bulgaria: Technophos

The Ecophos® group has invested 10 million euros in this ultra-modern centre, at the cutting edge of new technology, where all the semi-industrial units for the various processes implemented within the group are brought together.

This centre will be used to test the new methods developed in the laboratory as well as to demonstrate to customers that Ecophos®'s processes are optimum to meet their needs. This type of test is, in effect, essential to convince manufacturers to make investments of several millions through innovative technology. Ecophos® organises paying tests here for its customers, using their own raw materials, and provides them with comprehensive reports specific to their project.

## COMPLETED PROJECTS:

- **UCCI (Syria - 2011):** 60 kt per year of phosphate intended for animal feed.
- **Quimpac (Peru - 2015):** 60 kt per year of phosphate/phosphoric acid intended for animal feed and soluble fertilisers.
- **Technophos (Bulgaria -2016):** Semi-industrial technological centre with a processing capacity of 0.5-1 tonnes of rock per hour. Ecophos' technology showroom.

## PROJECTS CURRENTLY BEING EXECUTED:

- **Aliphos France (end of 2017 - Dunkirk):** Phase 1: 220 kt per year of phosphate intended for animal feed. Phase 2: Processing of 100 kt of ash per year to produce phosphoric acid for soluble fertilisers.
- **Evergrow (Egypt - mid-2018):** 110 kt per year of phosphate/phosphoric acid intended for animal feed and soluble fertilisers.
- **EGIL (India - end of 2018):** 200 kt per year of phosphate intended for animal feed.

## FUTURE PROJECTS:

- **Everphos (Egypt - 2021) 440 kt per year of calcium phosphate for food animal and fertiliser.**

## ONE TEAM WITH SEVERAL VALUES

Ecophos® is built around its 5 values

**1**

A PASSION FOR INNOVATION

**2**

TEAM SPIRIT

**3**

DO BUSINESS AT A GLOBAL LEVEL

**4**

RESPECT FOR LIFE

**5**

RESPECT / TRANSPARENCY / HONESTY

## TOMORROW

Our ambition is clear: to become the world leader in the phosphate industry. In practical terms, there is a 5 x 5 strategy for 2020

WITHIN

**5**

YEARS

**5**

PLANTS

IN

**5**

COUNTRIES

MANUFACTURING

**5**

KEY PRODUCTS

**500**

MILLION EUROS TURNOVER



High-resolution photos  
for the press can be downloaded from:  
[www.ecophos.com/press](http://www.ecophos.com/press)

**Press Contact**  
Dominique Frison  
Communication  
[dominique.frison@ecophos.com](mailto:dominique.frison@ecophos.com) / +32 474 528 445

**Ecophos®**  
Avenue Jean Monnet 1  
B - 1348 Louvain-la-Neuve · Belgium  
[www.ecophos.com](http://www.ecophos.com)