



GreenSwitch®  
Potassium



GreenTech  
Innovation  
& Concept  
Awards 2024

FINALIST

Innovation

Your chance to reduce your  
**Carbon Footprint**

GreenSwitch® Potassium Sulphate

A sustainable Premium  
Water Soluble SOP

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**VAN IPEREN®**  
LET'S MAKE THE GREEN SWITCH

# GreenSwitch® Potassium, driving agriculture innovation!

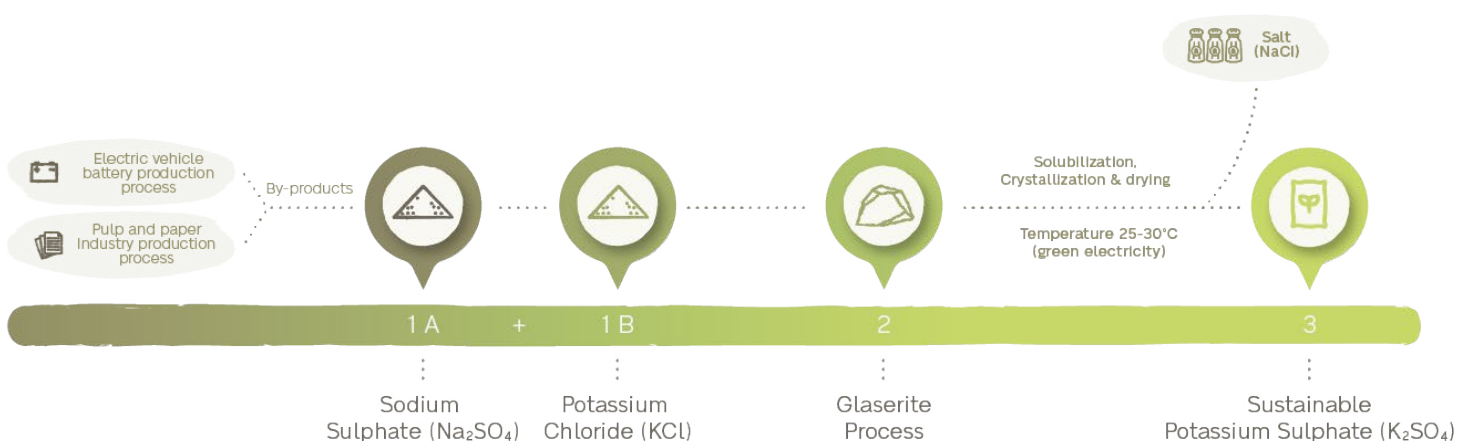
Mass production technologies made fertilizers widely available, helping growers to increase yields rapidly on less land. Van Iperen aims to reduce the environmental impact typically associated with fertilizer production, that's why we, as an alternative, introduce the GreenSwitch® Potassium.



GreenSwitch® Potassium is a fossil fuel-free production process, up-cycling residues from electric car batteries and the paper and pulp industry. The final product is **GreenSwitch® Potassium Sulphate**, a pure and fully water-soluble Potassium Sulphate with a significantly reduced carbon footprint<sup>(\*)</sup> suitable for foliar and fertigation applications. Produced in Sweden by our industrial partner CINIS Fertilizers, **GreenSwitch® Potassium Sulphate** is marketed by Van Iperen International.

## GreenSwitch® Potassium: A circular and sustainable production process

In short, the patent-protected process uses waste from other industries – ash from pulp and paper mills and waste salts ( $\text{Na}_2\text{SO}_4$ ) from electric car battery manufacturing – to produce a circular and fossil-free fertilizer, water-soluble Potassium Sulphate (SOP). The production process runs on green electricity, and recycles all water.



## GreenSwitch® Potassium partners

Van Iperen International aims to introduce new sustainable technologies in crop nutrition and distribute that through its global marketing network. Our industrial partner, Jakob Liedberg, Founder of CINIS, explains:



*"We are very happy to make a crossed-sector alliance with electric vehicle batteries and pulp and paper industries on our mission to close the loop on recycling industrial waste. The goal: producing a fossil fuel-free high-quality fertilizer with significantly less negative climate impact than today's standards".*

**Jakob Liedberg**  
CEO at CINIS Fertilizer (Sweden)



## What makes GreenSwitch® Potassium process sustainable?



**Upcycled raw materials:** The GreenSwitch® Potassium process, based on Cinis Technology, is grounded on using residues from other industries, including ashes from pulp mills and Sodium Sulphate ( $\text{Na}_2\text{SO}_4$ ) from electric car battery manufacturing. These industries are looking for sustainable ways to handle their by-products. This method of using residues as raw material in the production process of Potassium Sulphate is one-of-a-kind worldwide and is protected by a patent.



**Reduced energy consumption:** The GreenSwitch® Potassium process is based on green hydroelectrical power, the process runs at low temperatures (25-30°C) and low pressure resulting in less energy consumed compared to standards.



**Reducing Emissions and Pollution:** In case of extra heat, it will be sold to the grid for district heating. All the water that is consumed in the process is entirely recycled. Besides Potassium Sulphate, the GreenSwitch® Potassium process generates Sodium Chloride ( $\text{NaCl}$ ), commonly known as salt or table salt or used to de-ice roads. It's a totally safe, sustainable, and commercial by-product.



**Lower Carbon Footprint:** Because of the process itself, the circularity, and the use of green energy, the carbon footprint of the GreenSwitch® Potassium process is very low. A full Life Cycle Assessment (LCA) has been conducted to provide certified carbon footprint data, which is available upon request.

## GreenSwitch® Potassium Sulphate, another step in our Green Switch Journey!



### Green Switch Journey

**GreenSwitch® Potassium Sulphate** is part of the innovation projects to support our Green Switch Journey. With this journey, we want to bring our contribution to increasing the sustainability of global agriculture, both greenhouse horticulture, and open field. How? Besides GreenSwitch® Potassium, our Green Switch Journey includes GreenSwitch® Nitrate, a

sustainable process to produce Nitrate fertilizers with reduced carbon footprint, and Plants for Plants®, a new generation of plant-based biostimulants. Now, let's make the green switch!







# GreenSwitch® Potassium Sulphate (SOP)

**GreenSwitch® Potassium Sulphate HG** is the first water soluble Potassium Sulphate fertilizer produced through an environmentally friendly circular process with reduced carbon footprint in Sweden. It is produced by our trusted industrial partner, CINIS Fertilizer.

GreenSwitch SOP is a highly pure Potassium fertilizer, which dissolves rapidly and completely. Like conventional water-soluble SOP, GreenSwitch SOP can be used in any fertilization program for high-tech greenhouse and open field fertigation as well as for foliar application.

Our product is not sensitive to caking and is recommended during fruit or tuber development and up until maturation, and during coloring of fruits. The high level of Potassium in our formula plays an essential role in achieving higher quality yields.

Growers using GreenSwitch® products reduce their Carbon Footprint and bring waste back to life. With GreenSwitch® Potassium Sulphate, growers make the switch to sustainable high-tech agriculture.

-  The first circular Potassium Sulphate fertilizer
-  Patented, significantly reduced carbon footprint production process
-  Minimum 51% K<sub>2</sub>O potassium oxide formula, 53% (typical)
-  Improves fruit quality, shelf life and increases plant drought resistance
-  Limits vegetative growth as of fruit setting
-  Developed for fertigation in open field and greenhouses.  
Also suitable for foliar application



GreenSwitch®  
Potassium

## Composition (%w/w)

Potassium oxide	> 51%
Potassium	> 42%
Sulfur trioxide	> 45%
Sulfur	> 18%
Potassium Oxide (typical)	> 53%

## Packaging



Available soon.  
Check it out now!

Van Iperen International B.V.

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