

GreenSwitch® Potassium Sulphate

A sustainable alternative to conventional SOP





GreenSwitch® Potassium, driving agriculture innovation!

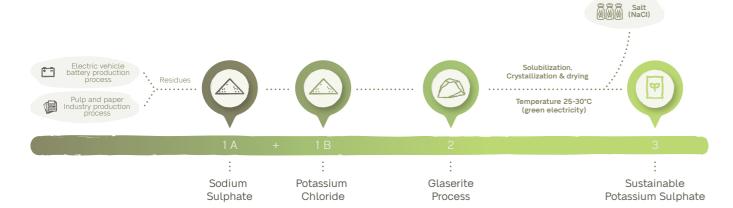
Mass production technologies made fertilizers widely available, helping growers to increase yields rapidly on less land. Van Iperen aims to reduce the environmental impact typically associated with fertilizer production, that's why we, as an alternative, introduce the GreenSwitch® Potassium.



GreenSwitch® Potassium is a fossil fuel-free production process, up-cycling residues from electric car batteries and the paper and pulp industry with zero emission and zero pollution. The final product is **GreenSwitch® Potassium Sulfate**, a pure and fully water-soluble Potassium Sulfate with a close to zero carbon footprint(*) suitable for foliar and fertigation applications. Produced in Sweden by our industrial partner CINIS Fertilizers, **GreenSwitch® Potassium Sulfate** 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 (Na2SO4) 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, recycles all water, and is designed to be emission and pollution free.



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 useful 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 (Na2SO4) 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 by 50%: The GreenSwitch® Potassium process is based on green hydroelectrical power, the process runs at low temperatures (25-30°C) and low pressure resulting in 50% less energy consumed compared to standards.



Achieving zero Emissions and zero Pollution: The GreenSwitch® Potassium process does not release any emissions into the environment. 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 (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(*).

(*)Currently, a full LCA (Life Cycle Assessment) of the GreenSwitch® Potassium production process is done to provide certified data on the carbon footprint.

GreenSwitch® Potassium Sulphate, another step in our 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 a close to zero 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 Sulfate fertilizer produced through environmentally friendly circular process with minimal 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, close to zero carbon footprint production process(*)



Minimum 51% K₂O potassium oxide formula



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*

Composition (%w/w)

Potassium Oxide	> 51%
Potassium	> 42%
Sulphur Trioxide	> 45%
Sulphur	> 18%

Packaging











