



A recycled mineral that
can make your products
more circular and reduce
their carbon footprint

VersaLime™ by Stora Enso

Replacing non-renewable materials with a circular by-product
from paper and board production



Prepare your business for the circular economy

The global consumption of material is increasing each year, with many industries relying heavily on non-renewable resources. This is not a sustainable way forward, and new material solutions are needed.

VersaLime™ by Stora Enso is a recycled mineral from pulp and paper refinement processes that helps you meet your customers' need for more circular materials. With VersaLime™ you can increase the recycled content and reduce the carbon footprint of products.

VersaLime™ is:



Recycled



Natural



Carbon friendly

Supports your business and the environment

The raw material used in VersaLime™ is carbon neutral and comes from existing processes at our mills. This fact means that VersaLime™ can substantially reduce the carbon footprint of products when replacing other material with similar content. Paired with a competitive price, you can be sure that VersaLime™ supports both your business and the environment.



A circular material with competitive pricing



Reduce the carbon footprint of products

Versatile by name, versatile by nature

As its name suggests, VersaLime™ offers wide areas of application* and can replace non-renewable materials and chemicals being used in:

Lightweight concrete

VersaLime™ is today used as an additive in the production of lightweight concrete blocks – where it is successfully used to replace non-renewable, virgin material and additives.

Cement production

In an industry struggling with high CO₂ emissions, VersaLime™ is an optimal replacement for limestone as raw material in cement production thanks to its unique mineralogical composition.

Hydraulic road binder

VersaLime™ is used to stabilise roads by creating a hard, durable paving material – at a lower cost and with a reduced CO₂ footprint compared to conventional material.

** See an extended list on the final spread*

Approved and ready to use

VersaLime™ is a registered chemical product approved by authorities according to the European REACH regulation.

A smarter way to make use of what we already generate

VersaLime™ is a great example of the kind of circular economy Stora Enso strives to create with all our products and processes, both from an environmental and business perspective. Because VersaLime™ is a by-product of an existing process, it makes a good case for how a side stream can create extra value, reduce waste and lower the environmental impact while also reducing costs.

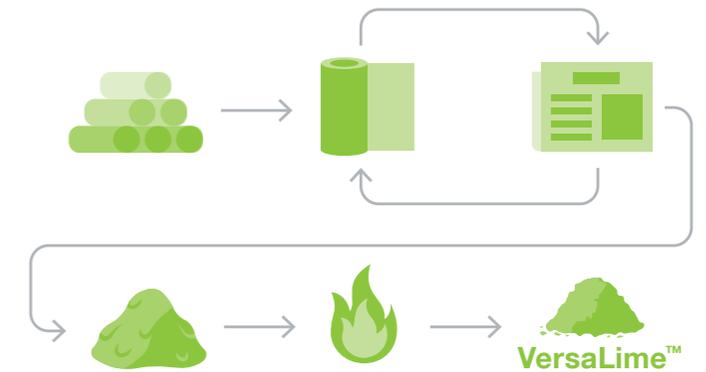
At the mills VersaLime™ comes from, 150 tonnes of fly ash is generated every day, that's 55 000 tonnes each year. 55 000 tonnes of recycled minerals that could help make your products more circular.

How is VersaLime™ generated?

When solid fuels such as sludge, bark and other biofuels are incinerated at our mills, they generate the fly ash that is VersaLime™. The most significant fuels being burnt in this process are pulp and paper sludge as described below.

What the process looks like:

- Wood is made into paper
- Paper becomes magazines, newspapers, books etc.
- These are used / recycled several times
- Eventually quality reaches a point when it can't be recycled any more
- This paper then becomes sludge
- Sludge is incinerated, powering our mills
- In the end generating VersaLime™



Different types suitable for different applications

With VersaLime™ being produced at different mills that create different products, its mineral composition and structure can vary – with various levels of CaO, SiO₂, Al₂O₃ and calcite. In structure, it can range from fine powder to coarser and rougher. These properties make VersaLime™ an eco-friendly option for multiple applications.



VersaLime™ from
our Sachsen mill



VersaLime™ from
our Hylte mill

The circular concept

VersaLime™ is part of what we call the circular concept – a drive to utilise side streams to their full potential and make good use of what we already generate.

A high interest for VersaLime™ has also been expressed for uses such as

Construction materials

In construction products or other durable materials, VersaLime™ can be included in the manufacturing to replace lime, limestone, cement or other virgin materials thanks to its chemical composition and binder properties.

Soil stabilisation

Infrastructure projects is an area where VersaLime™ has big potential – one of the major ones being to replace lime in soil stabilisation.

Foamed concrete

Using VersaLime™ as raw material in the production of foamed concrete would have benefits such as accelerating strength development and reducing CO₂ emissions. This application is under development.



Replacement for filler and ballast

In construction projects or other situations where concrete is being poured, VersaLime™ is an outstanding replacement for filler and ballast.

Steel production processes

Lime is used as a slag former in stainless steel making processes. With its high calcium oxide content, VersaLime™ has the potential to partly replace virgin lime – an application currently under joint development with selected customers.

Mineral wool production

In mineral wool production, cement is currently used to reutilise fine siliceous dust. VersaLime™ presents itself as the circular alternative.

About Stora Enso

Part of the bioeconomy, Stora Enso is a leading global provider of renewable solutions in packaging, biomaterials, wooden constructions and paper. We believe that everything that is made from fossil-based materials today can be made from a tree tomorrow.

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THE RENEWABLE MATERIALS COMPANY