



Vifour

Recycled

Vifour has as a base ingredient non-recyclable textiles that normally fall outside of the economy and end up in land

Circular

The material is endlessly recyclable without adding any materials or losing quality. This is why it is perfect for our circular system.

Development

Vifour is a part of a constant development process. At studio VivÈrdie we believe in never-ending research.

An
inovative
Textile
solution

1 An introduction to Vifour.
explore our research with us!

2 What studio VivÈrdie does.
How we strive towards a more sustainable design industry.

3 The problem of textile recycling.
Why it is so complicated in modern society.



4 The qualities and struggles of Vifour.

Get to know how the material works and what its pros and cons are.

5 What do we mix?
We only add natural ingredients!

6 The next step.
What are we up to now? How are we planning to move forward?



From Waste to Material

Recycling textiles in modern society is a challenging process. It is mostly only done with materials 100 per cent made from one material and even then there has to be virgin material added. In the modern age, most textiles end up in a landfill.

Vifour is a new material which gives these unrecyclable fabric scraps a new purpose in a fully circular coat. The new material can be recycled endlessly without losing quality.

The material has a leather-like feeling and can be made in different thicknesses and structures. It is a combination of unrecyclable fabric scraps (about 93 per cent) and a natural binding material. The materials added are entirely natural, vegan and biodegradable.

The beauty of the material is that it is 100 per cent circular. The idea is to create a system where the material will always come back to our factory. The material is made in a way that we can recycle it endlessly. There is no need to add anything during the recycling process. The material can simply be melted and shaped again.

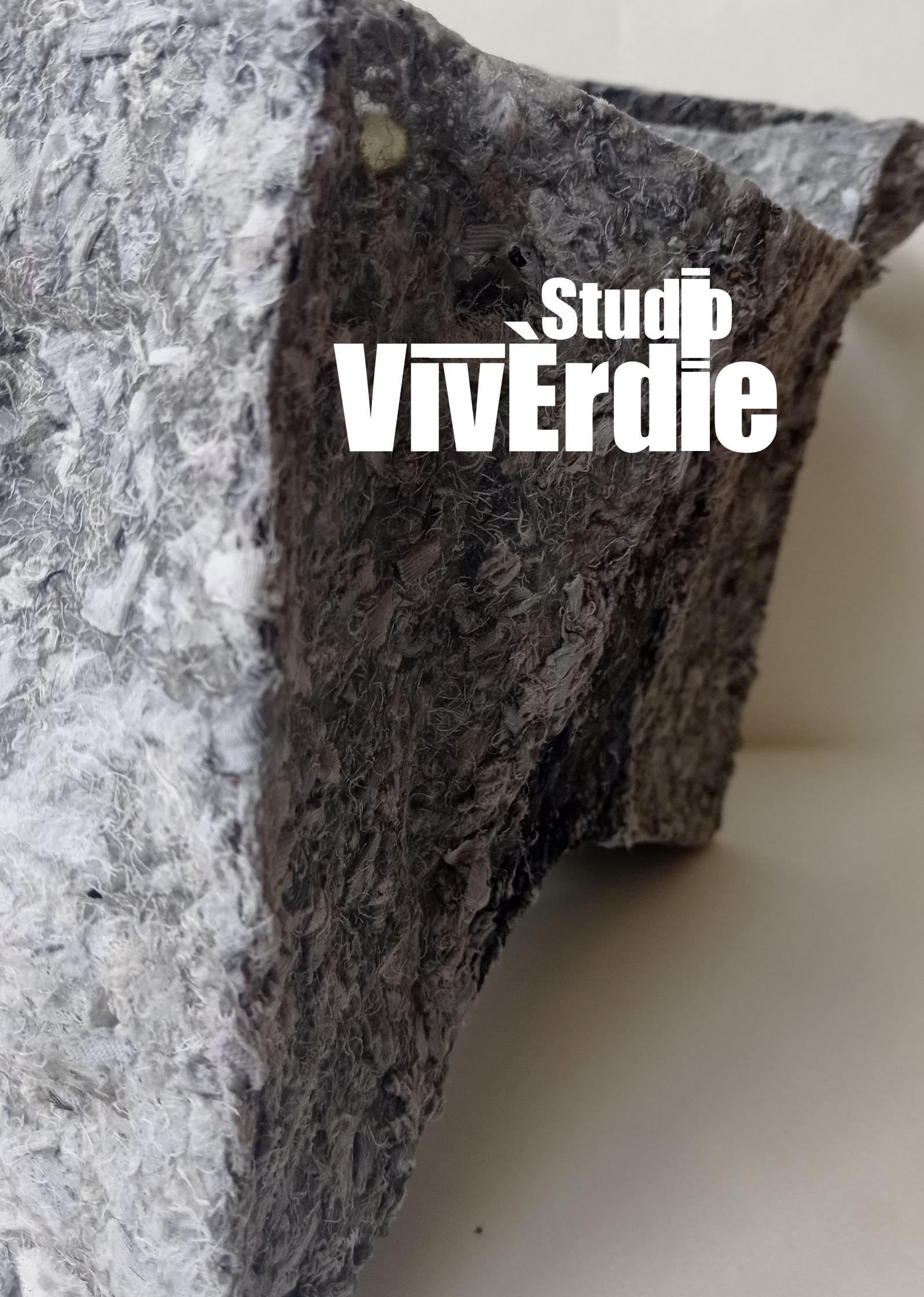


The material can be used in many different ways. It can be poured in a mould, spread out and sewn or shaped like a sculpture. When the material breaks or is ripped, it is easily prepared with some new material. After this process, you will no longer see where it is mended.

It is also possible to cover up the seams. This can create the solution of a seamless design without difficult patterns.

In a fully circular process, we are working towards a system where no more virgin materials are needed. We eliminate the idea of throwing things away, of considering materials as waste. The material would be sold to the designers, they will make a functional object out of it within the design industry. The leftovers from the cutting and the collection are sent back to the factory so that they can be recycled again.

The items will be sold to the consumer. When the items break, a special care package will be sent to the current owner, who can easily restore or even upgrade (adding a different colour for example) the item themselves. Once the item is worn out, it will be sent back to the factory in exchange for a discount coupon to ensure most of the items can be recycled. If however, the item does in the end end up in a landfill. The material will decompose much easier than a normal textile item.



**Studip
VivErdie**

What we stand for

Studio VivÈrdie is searching for a new way of design communication. The goal is to work sustainably towards a future with a different mindset regarding design and consumption.

Studio VivÈrdie strives to design with the earth and environment in mind and most importantly with the materials that are already here. We want to be a part of a movement that tries to tell stories and shape minds without exploiting the earth and its inhabitants.

To work towards this goal, Studio VivÈrdie is focusing on two pathways.

The first one is to try and change the mindsets of people. To show people different ways of thinking through performances and experiences. However, changing mindsets is harder if there is no alternative solution. This is why studio VivÈrdie also focuses on material innovations and chemistry. We are on a constant hunt for new and innovative ways to sustainably tell our stories. This way we introduce the watcher to the idea and introduce them to a solution all without polluting the planet.



Sustainable research

The main focus of studio VivÈrdie is sustainable research. With a degree in design and ongoing interest and a future master's degree in Science, we try to combine science, Physics and our knowledge of sustainability to create new solutions for the design industry.

Creating something new without influencing the environment is impossible. But sustainability (especially in the design industry) is desperately needed. This is why we try to search for ways to create something sustainable without being hindered in our design process. We think materials are key in this process. That is why we research new materials that function the same or even better than the materials currently used. In the research process, we try to think in every layer. Not only the origin of the material used but also the duration of use and what will happen to the material after its original life span. We believe in an economy without waste.

Mindset change

Next to our research, we think it is important to change mindsets. We create projects to on one hand show the possibilities of our sustainable research and on the other introduce the world to our way of thinking.

Most of our projects are not centred around sustainability, all projects are as sustainably made as possible but we think the problem is way deeper rooted. We try to focus most of our projects on social dilemmas that, according to us, in the end, lead to more sustainable choices.





Overconsumption Leading to landfill

What do you see? waste or a textile gold mine?

In our modern-day economy, fabric waste is a big problem. Even though there is a lot of different research going on about how to use these wasted materials. Still, only 12 per cent of the textiles used ends up being recycled. And from that percentage only a very very small part ends up back in the textile industry.



Even tho there is a lot of research going on to better recycle textiles, most of the clothes and other textile materials we use still end up in a landfill. A lot of modern synthetic materials are made to not decompose. This means that it can take them up to 200 years to disappear and even then they will not truly be decomposed because of the massive amount of toxins and microplastic that they leave behind.

For natural fibres, we have the same problem. Although they are originally not bad for the environment we treat them with so many chemicals to get them the way we want them, they still leave a lot of toxins and microplastics behind in the decomposing process.

With Vifour we aim to see this material no longer as waste but as a gold mine of new virgin materials ready to be transformed into new, usable material.

What is the meaning

Most recycled textiles are compressed into mattress fillings or building materials. only a small percentage is returned as a textile. Often when textiles are recycled there is a need to add virgin material and the material can often only be recycled once.



Material Use and Qualities

Vifour can function like other textile materials but it has some other unique qualities.

As a normal textile

The material can be used as any other textile. It can be spread out into a flat piece and delivered on a roll by the meter. It can be sewn both by hand and on a normal or industrial sewing machine. The thickness and movability of the material in this case are disabled by leather. It is slightly stiff but quite breathable and flexible in many ways.

seamless

The material starts as a gooey substance and is with heat easily returned to this state. Because of this possibility, it is very easy to create a seamless look. After sewing the material we take some new strokes of material, heat them and fill the seams with the gooey substance. When it dries there is no way to see where the seam used to be. It is also possible to use the melted material to stick two pieces together. no seams needed.

no finishing needed

The material does not fray. This means that there is no finishing needed. The material can be simply cut into shapes and it will stay this way. The other option is to create a raw edge. In which the material is carefully ripped at the place where the edge should be. This gives a nice "unfinished" look.

Special qualities

Because the material starts as a gooey substance. The material can also be shaped and moulded. We can create 3d prints and structures on a flat surface (think of ribs, points or flowers sticking out of the fabric) or it can be shaped in a new shape (like an ornament or statue). In this case, the material can remain soft but loses some of its flexibility. Nevertheless, could be perfectly used for clothes or other textile purposes.



Like textile

The material can be used the same as a normal textile. it can be sewn under normal and industrial sewing machines.

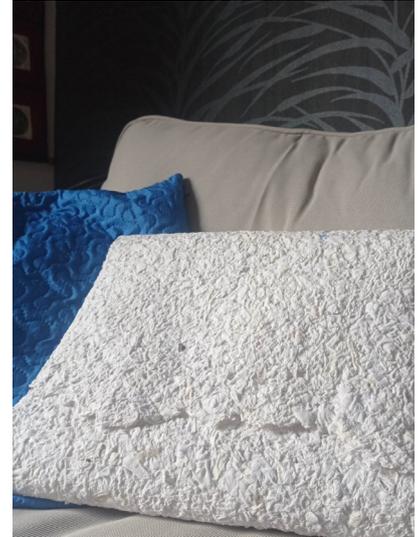
Use of the material

There are two options in this department. The first is our vegan variant of the material which is washable like wool. It is more vulnerable when it is wet but after it dries it is just as strong as before. The second is our non-vegan version, which can handle water a lot better. It can be both cold steamed and washed by hand and is a lot stronger in the drying process. Both need to be dried laying down. Sadly we are not yet at the point where the material will be able to go into the washing machine. But we are working towards a more modern functional solution.



Seamless

By spreading the material over a seam we can create seamless designs without complicated patters.



No finishing

The material does not fray so there is finishing needed. We can either cut it and it will stay straight or use the natural finish



Fix it kit

The material is still slightly vulnerable. Although it can handle a lot it is not yet as strong as normal leather. Of course, we are constantly researching and working towards a stronger quality but until that time we developed a solution. The "fix it kit". The beauty of the material is that, if it rips, it can be fixed without visible results afterwards. The solution is to repair the rip with some more of the material. After this dries you will not be able to see the rip anymore. The "fix it kit" delivered with every big purchase of material contains a little bit of the dried material with instructions on how to use it to repair the damage. The dried material can be cooked up with a bit of water so that it becomes soft and mouldable. This can be laid out over the rip and massaged into the material. after a few hours of drying the damaged product will be as good as new.

Ingredients

what is it made of

The main ingredient of the material is fabric scraps that were formally seen as non-recyclable. Think of shredded materials where there are too many different fibre sorts mixed or where the fibres are too short to spin again. These fabrics are shredded and fiberized into small pieces which make up the base of the material.

Next to the fabric scraps, we use natural materials that are locally sourced. This makes up around 7 % of the material. This is the natural binding material. We make sure that all materials added do not harm the environment. Even if the material will end up in a landfill, the only harm will come from the recycled fabric scraps, not from the added material. And even the shredded material will be less harmful than a fully new garment made from virgin materials. The shredded materials will be easier to digest by the earth.

We only add natural ingredients





Circularity

A system

The most beautiful quality of the material is that it is endlessly recyclable. The material can be melted and spread out again without adding any new material and without losing any quality. Even after the material has been recycled 50 times, there will be no difference in look, strength or overall quality.

The material is part of a circular system in which we aim to get as much of the material back to be recycled. Through a survey, we noticed that a leasing process for clothes and other textile materials does not work perfectly since most people prefer to own these objects. We noticed that the best way to get the materials returned is through telling our story, creating a community and rewarding the return. We decided to go with a system in which the consumer buys the original material once and after that only pays for the production costs. Since the making of the original material is more expensive than the recycling process this is still profitable for us as the material produced. The material will go from us to the designer and afterwards to the consumer. The next time the Designer orders material, They will get the discount according to the amount of fabric they return. We will help and encourage the designer to do the same with their customers as we do with the designer. But to make sure that we will get the most of the material back we will also allow the consumer to return the fabric directly to us in return for discount checks on our own or other designers' products.

currently, we are still small-scale producing but we are planning to upgrade to a more functional production system. We would like to use the factory as circular as possible. In the process of the creation of the material, there is some water used. Not even close to the amount of water used in the production of other textile materials but never the less. However, the water does not get polluted in the prosses. This is why we developed a system in which the water is reused as often as possible. After the heating process and the water will evaporate into a catching system in which we collect the water again for reuse. Because of this process, we can collect the energy needed to flatten out the material. There will still be some extra energy needed for the heating of the system. We hope to retrieve this by a solar or wind system.

Information Sharing

Every product made of our material will have a label with a QR code corresponding to the material. The QR code will lead to a website where the consumer can easily access the different return options of the material and to the possibility to order a "fix it kit" for this certain object. which ensures a long lifestyle of the products. Because of this QR code, even products that are sold second-hand won't be lost in the supply line.

suppliers

Because we only need fabric scraps to create new material we want to find a supplier to get access to the shredded scraps we need. For this, we will collaborate with Miller waste mills. They will provide us with materials no longer suited for most of their customers. The materials where the fibres are too short to work in other recycling processes. These fibres will be sorted by colour and arrive at our factory to be transformed into new material lines.





Textile waste
+
Natural binder

Material creation

VivÈrdie

Recycling

Designer

Creating

Consumer

Scraps returned

Return for community discount

Resold

"Fix it" Kit

Return for discount

Return for discount

Next What now? step



Of course, it is important to think about the future. At studio VivÈrdie we believe in growing as well in size as in quality. This is why we want to continue our research but spontaneously find new collaborations and improve our production method.



The next step for Vifour would be to spread our contact network and start to upscale our production. Currently, we are sending out our samples to several big brands and we are present at as many designer fairs as possible (Dutch design week (Netherlands), Heimtextil (Germany), and Salone di Mobile (Italy)). Through this, we are hoping to spread our story and let people meet our new material. Another way we are working on spreading the word is through collaborations.



Currently, we are working together with different design companies such as Tess van Zaalingen en Von Janssen. Of course, our research is still in process as well. We believe in the lifelong learning concept and a constant development system. However, we believe that just like a fruit tree, it is not only important to grow towards the sky, but it is also important to make sure your fruit has quality and is accessible. Through the collaborations, we try to spontaneously stand in the industry while still working on our research. This way we are able to mostly fund our research.



Thank you
For
Reading